# THE BUILDER

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*A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR.*

WITH WHICH IS INCORPORATED THE "BRITISH ARCHITECT."

VOL. CXXI.—No. 4098. AUGUST 19, 1921.

## ARCHITECTURE AND TRAVEL.

THE practical effect of travel upon architecture depends on many factors, and cannot be appraised by any certain standard. Its great value is recognised by the studentship system, under which young artists are sent to Athens and Rome, or allowed to wander still further afield under the guidance of their own fancy.

The reasons for founding the schools at Rome were obvious enough in the days of the great Renaissance tradition. Rome was believed to contain all that was correct and authentic in architecture, and if a king or a noble in France or England wished to build according to the exact rules, two courses were open to him, either to invite an Italian architect to undertake the work or send his native architects to learn their art in Rome. Both methods were tried, but owing to the natural desire to have a footing in another country rather than allow that other country to gain admittance at home, the second course was preferred on political as well as upon artistic grounds. Governmental assistance as well as the support of many able practitioners still preserves for Rome the first place, even though faith in the exact rules of architecture has wavered or attached itself to other objects. The Renaissance style—of which the tradition still lingers—possesses too many practical advantages to be lightly discarded, and in spite of some great reputations gained by those who have affected to lead architecture into purer paths, it has always been easier to write against the style than to create any serious building tradition in opposition to it.

When, in the old age of the Renaissance movement, a considerable body of artists concluded that Rome did not contain, and never had, the sacred fire of architectural truth, other centres of pilgrimage were discovered by devotees of Greek or Gothic styles. The period in which a man happens to live and practise his art affects the question. Wren in Paris had no doubts as to the class of work proper for his attention. Starting with a mind already bent upon the revival of the Roman style in England, every detail he saw would be valued by him according to its possible contribution to the great ideal; but if travel affords support to architecture in the ascendency of a great national movement, it may just as readily contribute seeds of discord in a period of flux in architectural ideas. Jacques German Soufflot, born too late to be carried upon the crest of the great wave of French Renaissance, found in Pompeii instead of Rome the inspiration for the more restrained and sombre works of his later years.

The Gothic revival, although more limited in scope and lacking the support of the classical literature that had done so much to encourage the imitation of ancient Roman buildings, was yet a great popular movement, and the travels of G. E. Street in Spain bore fruit in proportion as his mind was attuned to the collective enthusiasm of his brother revivalists. It seems fair to assume that the movement received fresh impetus from the renewed assurance that Christianity in Spain had followed up its conquests over Moorish infidelity by building cathedrals in the Gothic style. Only twenty-three years separate the publication in 1842 of Owen Jones' monumental work upon the Alhambra from the publication in 1865 of G. E. Street's book upon Spanish Gothic, yet a whole world of difference exists in the mental outlook of the two author-travellers. Street's name enjoys an international reputation as architect of the Law Courts, whereas Owen Jones' researches, unbacked by a popular movement, have had less effect upon practical construction, and his fame, except for memories of the architectural courts in the Crystal Palace, depends largely upon his literary output.

The benefit of travel is greatest, perhaps, when the student is fired, first of all, with a love of his own native architecture, which he firmly believes to be right in the main, even if still to be improved by variety of detail. In such a frame of mind he completes his studies without allowing himself to be perverted to the worship of strange gods, and hurries back within a reasonable period to take up practice upon the traditional lines laid down by the conditions of his native place. The man of critical spirit, on the other hand, is all too prone to find beauty only in the unattainable, in styles long dead, the fragments of which can only be discovered by the delving processes of archæology. It was given to the late John Bentley to combine elements from both these natures and to blend past and present in his wonderful Roman Catholic Cathedral at Westminster, in which a style, dead in England since the time of the Saxons, is made to live again as if by the hands of a potent Necromancer.

In contradistinction to those who travel for purposes of inquiry into details of historical style, other travellers take for their subject the larger elements of planning and arrangement. It seems likely that in the early days of the great constructional styles the attention of the traveller was directed to this second form of learning. The round churches built in many parts of Europe by the Knights Templars seem to indicate an interest in the main outlines rather than in the minor details of architecture. Built in imitation of the Dome of the Rock, at Jerusalem, their dimensions and details differ from those of the original, and it is a matter of great interest to follow in imagination the attempts of the returned Crusader to explain to the builders the exact appearance of the "Temple of the Lord," with its marble pillars and domed roof. So difficult is it to convey an impression of architecture in mere words that a detailed description of the Dome of the Rock—if it ignored dimensions and colour decoration—might seem to apply with reasonable exactness when read beneath the vault of the Temple Church.

A lamentable instance of the effect of travel upon architecture is to be seen within a walled city of Europe, where a whole group of streets with houses dating from the sixteenth century or earlier was demolished to make way for an improvement scheme designed by a foreign architect educated in England. Though founded in an age-long tradition, the beautiful domestic architecture of the city was not included in any of the text books recommended to be studied for the R.I.B.A. Examination, and it seemed that it possessed no claims to consideration. Long familiarity with the sweeping surfaces of vault and dome had rendered the architect forgetful of their beauty, and he improved (!) upon them with steel girders and jack arches, the fruit of his English studies. It is true that every girder had to be brought to the site, with difficulty, on the back of a camel (although excellent stone for vaulting abounds in the district), yet who would begrudge the cost in the interests of civilization and progress!

# NOTES.

**Houses on the Instalment System.**

WE recently referred—with some doubt, we confess, as to its accuracy—to the statement that, under a scheme of the Ministry of Health, cottages which have cost a thousand pounds or more may be bought by, or for, the working classes for some hundreds less. We now read that the Blackpool Corporation is offering to sell, for an initial outlay of £20, houses to be erected on three sites in the town. Applications are invited from tenants and prospective tenants for the purchase of the houses, of which there are four types, and the prices range from £750 to £900, which, it is stated, are much below the actual cost of construction. An arrangement may be made with the Corporation for an advance on mortgage, the repayments to be by weekly or monthly instalments, extending over a period of 15, 20 or 25 years. In view of a possible and even probable considerable reduction in the cost of house building, this may be good business from the standpoint of the Corporation, but what a position to have reached!

**By-laws and Foundations.**

THE Ministry of Health has issued still another circular (see page 232) dealing with by-laws, frankly acknowledging that they are obsolete in many instances, even when materials in use for many years are employed, and pointing out that the Housing Act of 1919 gave local authorities power to dispense with conformity with their by-laws, not only in their own housing schemes but to permit the same freedom to others, and constituted a power of appeal if a local authority refused to grant concessions which the builder held to be reasonable.

**Spreading Footings.**

ONE economy, which can well be effected in most light buildings, perhaps not exactly due to the framing of the by-laws "at a time when the inherent difficulties of building were far less acute," but rather to the fact that by-laws "do not take into account the progress which has been made in the development of new methods of construction," is the omission of spreading footings, which are in such buildings a retention of the tradition from other conditions when the now universal custom of putting concrete under walls was not observed. To spread the brickwork so as not to exceed a suitable load on the subsoil was then essential, and with lime concrete capable of bearing less compression than the present-day Portland cement concrete was very desirable, but with modern practice this spreading of the base of the wall is unnecessary, and although, owing to the difficulty of digging narrow trenches of any depth, the spread of the concrete cannot usually be much reduced, the consideration of the loads to be carried and the bearing capacity of the concrete and subsoil will often merit more attention than is usually given. The gain in omitting spreading footings is considerably more than the actual material employed, although this is not emphasised in most bills of quantities, as the labour involved in the lowest stages of a wall is from its position considerably greater than elsewhere; and this is still further increased by the thought expended in the receding courses. In fact, throughout brickwork much expenditure can be eliminated by a little thought in preparing the original lay-out, and it is much to be regretted that this factor is so often neglected in estimating.

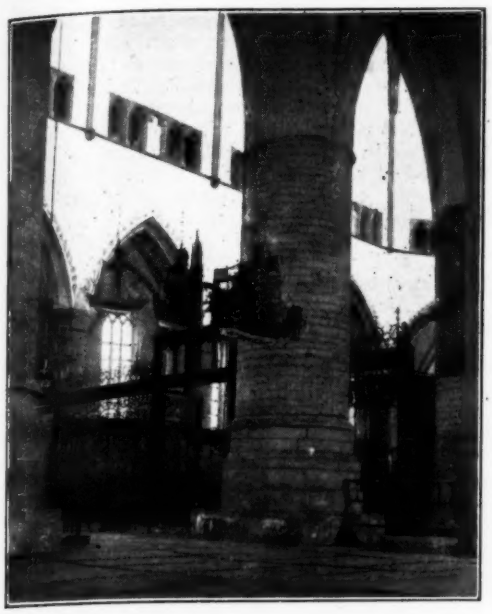
Plaque at the Foundling Hospital, Florence.

**The Value of Tradition.**

OUR churches — especially their interiors—bear constant witness to the lack of knowledge which would secure us from many of the ugly features which are introduced into them. The noble stone-built church, for instance, has the flagging of the aisles removed to accommodate tiling that only befits a villa in the suburbs. Congruity with the building itself counts for nothing, and we regard its requirements in the light of our knowledge, not in the light of what the building needs, and it is our knowledge which is at fault. It is at fault because there is no tradition to secure that what is done in the present grows out of the past, instead of contradicting it, which our mechanical tiling, our ecclesiastical screen work, and all the hundred-and-one substitutes for a simple, spontaneous, and direct craftsmanship tend to do. As we look from one to the other, as the eye travels from "ecclesiastical" screen work and suburban tiles to the often rather sorrowful splendours of the old building, one has to feel that there is less anomaly between the congregation and vicar with the past than with these latter-day trivialities and substitutes.

**Photography and Art.**

THE consideration of how far a photograph is useful in instructing us about art is raised in an article appearing in a contemporary, which quotes the remark of a headmaster that photographs "are of little use in cultivating the appreciative faculty." There is some



**Interior of St. Bavo, Haarlem.**
[From a photograph by Mr. J. J. LEANING.]

truth in this, and there is danger to the student on relying too much on photographs. But the writer goes further in stating that "nothing can teach the appreciation of works of art, except works of art themselves." The photograph which reproduces details of buildings, or buildings themselves, will give us pleasure only as it recalls what we have seen in actual architecture. As an alternative to drawing directly from the buildings themselves their educational value is small, and it is harmful to the student to rely on this alternative to direct drawing. To say that no appreciation of works of art can be cultivated through the photograph is, however, to go too far. Those who have not been in Italy will know how greatly their appreciation has been stimulated through studying photographic reproductions of sculpture and wall painting to be seen there, and who can rightly claim that their knowledge has been fostered thereby.

---

**The Preservation of Old Villages.**

WE have often urged the necessity for a widespread effort to preserve the desirable features of our old villages, which are even more in danger of disappearing now that so many schemes of town-planning are being developed. We are, therefore, very glad to note the well-directed efforts by the Civic Society of Birmingham to preserve the historic and natural features of the old village of Northfield from damage and encroachment. A public competition was arranged for a plan to preserve the village within the proposed road plan of the S.W. town-planning scheme, and as that result was not all that could be wished a scheme has been prepared by the technical committee of the Society, and a very attractive pictorial map of it appears in the souvenir of Northfield village just issued (price, 2s.). This well-produced little brochure would convince anyone of the value and importance of the Society's effort to save this part of our national heritance. We wish this public-spirited effort could be widely emulated, for instances like Northfield abound all over the country. The Society backs up its beliefs by a conditional promise to contribute one thousand pounds towards the cost of laying out a permanent open space and recreation ground.

---

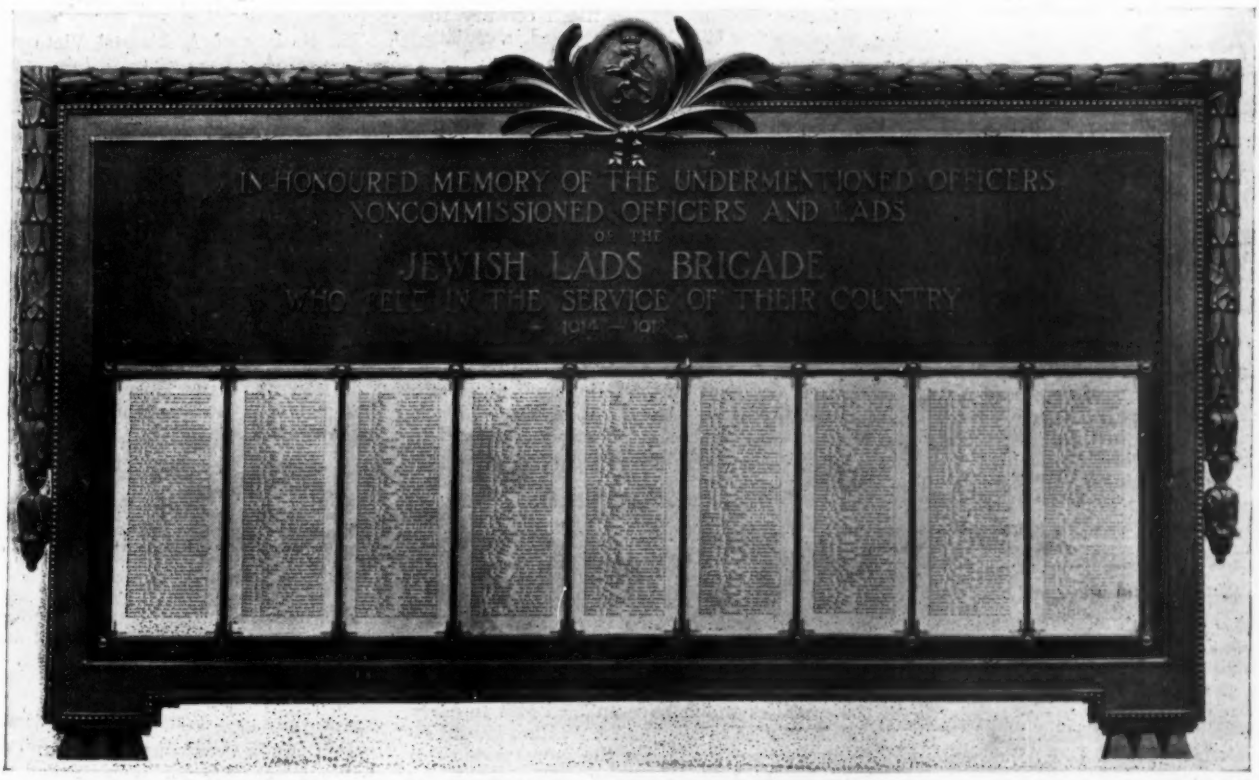
**Sherborne Abbey.**

A NOT unreasonable suggestion is now put forward that the restoration of the Lady Chapel at Sherborne Abbey Church should be deferred until more reason is shown for the desire and necessity for an additional chapel. At the same time it is hardly a reason against proceeding that the old chapel has been perverted from its original use for 350 years.

---

**A Great Lithographer.**

AN exceptional personality was the late Frederick Vincent Brooks, who died last week at the age of seventy-two, very sincerely lamented by all who knew him. Many of us have benefited by the expert advice of Mr. Brooks, who was one of the first authorities on lithography and sun-copying, and was official printer to the Senefelder Club. Some very fine work has been produced by his firm during the many years since his father left him in charge, and we must wish his sons every success in carrying on the various methods of black-and-white and colour printing developed so admirably for over fifty years. Mr. Brooks won a college scholarship at Cambridge; he was a distinguished oarsman, a clever actor, and an active churchman Added to all this, he was a clever business man, unselfish and kind and a singularly well-balanced character.


IN HONOURED MEMORY OF THE UNDERMENTIONED OFFICERS
NONCOMMISSIONED OFFICERS AND LADS
OF THE
JEWISH LADS BRIGADE
WHO FELL IN THE SERVICE OF THEIR COUNTRY

**A Memorial Tablet for Jewish Lads Brigade.**
[The border and letters are carried out in bronze, with a background in walnut, and the names are inscribed on vellum. Messrs. Josephs, of Godliman-street, E.C., are the architects, and the tablet was executed by Messrs. Cashmore & Co., Ltd.]

# GENERAL NEWS.

### An Architect's Estate.

The late Mr. James R. Burnett, architect, of Inverness, left estate valued at £8,958.

### Bishop's Lydeard Church.

Funds are being raised for the restoration of the fine old church tower at Bishop's Lydeard, Somerset.

### Newcastle War Memorial.

Mr. Alfred Drury, R.A., whose designs and models were accepted for the erection of the Newcastle war memorial, in Eldon-square, has found it impossible owing to other work to proceed at once with the Newcastle memorial, and the War Memorial Committee has chosen Mr. Charles L. Hartwell, A.R.A., to carry out the work.

### Historical Monuments Commission.

The King has appointed Sir Arthur John Evans, F.R.S.; Sir Charles Hercules Read, President of the Society of Antiquaries of London; Dr. M. R. James, Provost of Eton College; Mr. Duncan Hector Montgomerie; Mr. William Page; and Mr. Charles Read Peers to be members of the Royal Commission on Historical Monuments (England).

### The Guards' Memorial.

The House of Commons on Monday assented to the motion of Sir John Gilmour that it was desirable to proceed with the memorial to the Brigade of Guards on the Horse Guards' Parade. The position, he said, was unequalled in any other part of London, and the scheme would add to the attractions of the place by means of the grass plots outside the India Office.

The plans of Mr. F. W. Speaight for the Horse Guards' Parade Improvement, with certain modifications made by the Office of Works, have we, are informed, been approved by Parliament.

### Proposed New Picture Theatres at Barnsley.

Plans have been approved for the erection of a new picture theatre in Doncaster-road, Barnsley, and plans have been submitted to the Barnsley Borough Council for alterations and additions to the Electric Theatre, Barnsley. Plans have been submitted to the Thorne Urban District Council for the erection of a picture theatre at Staniforth, near Doncaster. Mr. P. A. Hinchcliffe, F.R.I.B.A., of Barnsley, is the architect for the above works.

### Glastonbury Abbey.

The excavations at Glastonbury Abbey have, says the *Morning Post*, been resumed since the beginning of July by the Somersetshire Archæological and Natural History Society. The work at the Loretto Chapel is nearly completed, and more of the pavement of the Northern Transept has been found. An excavation to the north of the existing Lady Chapel has been begun, and the base of the pillar, which, according to Spelman in the first volume of his "Concilia," marks the position of the Church of Joseph of Arimathea, has been discovered. It is proposed to continue the work here in the hope of finding some foundations of this church; but unless more funds are forthcoming it will be impossible to do so beyond the middle of this month. The joint directors of the work are Messrs. F. Bligh Bond and Sebastian Evans.

### Unification and Registration.

As announced in part of our last issue, a Committee of Associates of the R.I.B.A. has been appointed to consider the unification and registration proposals. The members of the Committee are:—

*Chairman*—Mr. Stanley Hamp.

*Hon. Secretaries*—Messrs. L. H. Bucknell and H. C. Fisher.

*Other Members*—Messrs. H. W. Cubitt, J. L. Elkington, P. W. Hubbard, A. W. Sheppard, M. Waterhouse, W. R. Davidge, K. Gammall, S. H. Loweth, J. D. Scott, H. A. Welch, J. H. Worthington (representative of the Manchester Society), L. B. Budden (representative of the Liverpool Society), A. L. Snow (representative of the Birmingham Society), J. I. Jones (representative of the Bristol and South Wales Society).

Other allied societies have been asked to send representatives so that the report of the Committee should be as representative as possible of the feelings of the Associates throughout the country. Several meetings have been held, and the Committee hopes soon to complete its report.

### Victoria and Albert Museum.

The Victoria and Albert Museum has recently acquired the bedstead in black and gold lacquer which formed one of the most interesting features of the recent sale of the Duke of Beaufort's furniture from Badminton. This bedstead is perhaps as good an example as exists of the Chinese mode which was so successfully used by Chippendale and his contemporaries in the middle of the eighteenth century. For the present it has been placed in Room 57, in which also David Garrick's bedroom furniture is exhibited. The Department of Woodwork is at present being re-arranged, with the object of giving more space especially to the English furniture, which has hitherto suffered from unavoidable congestion. Room 58 has now been cleared almost entirely of the foreign examples recently exhibited therein, and the whole of this floor will ultimately be devoted to British work.

### Excavations in Tiberias.

The excavations at Tiberias, conducted by the Hebrew Archæological Society last winter, states the *Palestine Weekly*, uncovered a portion of an ancient synagogue, to fix the position of the Herodian citadel, and to locate the third century necropolis. The excavation was resumed in the spring, when the whole of the synagogue was laid bare. The building was shown to have had a life of about 1,000 years from its origin in the first or second century to the middle of the 13th century, when Tiberias was destroyed by the Mongols. It appears that about the ninth century the synagogue was partially destroyed, and later repaired in amateur fashion, columns being replaced upside down, and the marble pavement completed with odds and ends of marble picked up anywhere in the neighbourhood. The building was probably used by Moslems as a mosque. Among the many articles found were a large stone throne and a long inscription on a slab of blue marble, which apparently came from a neighbouring Christian cemetery and was made use of by later occupants of the building as part of the flooring. It is carefully dated in the period shortly after the rise of Islam. The most interesting find of all was a stone seven-branched candlestick, which seems to be a replica of the original in the Temple, which is depicted on the Titus arch at Rome. The candlestick is carved out of a solid block of stone, and all the traditional ornamentation is preserved. The shaft and base are missing.

### The Concrete Institute.

Mr. Percy L. Marks having resigned the position of Secretary of the Concrete Institute, the Council of that body has appointed Mr. Maurice Kiddy, Assistant Secretary of the Society of Architects, to the vacant position. Mr. Kiddy, who will take up the new appointment in the autumn, is well known to many members of the architectural profession, and the qualities which have enabled him to carry out his duties in his present position should go some way to fit him for the more responsible post he is about to occupy. Mr. Kiddy was educated at Highgate School, gaining prizes in English literature and essay, and he passed an examination of the Incorporated Society of Musicians with honours when aged ten. Before the war, he was in the secretarial London office of the Buenos Aires and Pacific Railway Co., Ltd. He enlisted on August 4, 1914, in the L.R.B., and went with that regiment to France in November, 1914, in time to be wounded at the first battle of Ypres. He was afterwards commissioned, and saw service in Gallipoli and Egypt with the infantry. In 1917 he transferred to the Royal Flying Corps, and was soon afterwards promoted Captain, subsequently becoming Captain in the Royal Air Force. After demobilisation in 1919, he was for a time on the editorial staff of the London *Daily News*, leaving there to take up the appointment, in May 1919, of Assistant Secretary to the Society of Architects.

### The Royal Institute of British Architects.

THE following revisions have been made by the Board of Architectural Education of the Royal Institute of British Architects in the list of Testimonies of Study to be submitted by candidates for the Intermediate Examination. Testimonies of Study prepared under the old syllabus will be accepted for approval by the Board if submitted prior to the next Intermediate Examination to be held in June, 1922:—

"(1) and (2)—Two sheets showing the application of one or more of the orders of architecture to a building. A general drawing of the building to be given on one sheet with details on the second.

"(3), (4), and (5)—One sheet of details of Classic ornament from the round or one sheet of mediæval ornament—freehand drawing from the round. Two sheets of measured drawings of an existing building or portion of a building, to be selected by the candidate, with the plottings and sketches.

"(6), (7), and (8)—Three sheets of working drawings of a building of moderate dimensions showing clearly the construction of floors, roofs, joinery, &c. The general drawing to be drawn to the scale of 8 ft. to 1 in. with ½ in. and full size details."

# COMPETITION NEWS.

### Victory Scholarship.

The Society of Architects' Victory Scholarship, 1921, has been awarded jointly to Messrs. J. H. White, A.R.I.B.A., and Bright Fraser, M.S.A., whose designs are illustrated in this issue. The designs submitted are on exhibition at the premises of the Society, 28, Bedford-square, W.C.

### Alston.

The Alston War Memorial Committee has selected the design submitted by Messrs. Parkin, Son, Crosby Ravensworth, for a war memorial, which will take the form of an obelisk.

### Paisley.

FOR THE WAR MEMORIAL COMMITTEE.—Designs for a war memorial. (See our issue for August 12.)

### Birmingham.

FOR THE WAR MEMORIAL COMMITTEE.—Designs for a war memorial. Sending-in day October 12. (See our issue for June 17.)

### Cairo.

FOR THE EGYPTIAN GOVERNMENT.—Designs for the new Qasr el' Aini Hospital and School at Cairo. Sending-in day, October 3. (See our issue for April 8.)

### Wandsworth.

FOR THE WANDSWORTH BOROUGH COUNCIL.—Lay-out schemes for a park and recreation ground. Sending-in day September 5. (See our issue for June 17.)

# CORRESPONDENCE.

### Unemployment in the Building Trade.

Sir,—The labour return for July 15 last gives the number of unemployed in the industry as 132,000. In addition, there are the hands kept on in the hope of something turning up. It would be interesting to compare the numbers in the trade to-day with those employed in, say, 1905. There is, no doubt, sufficient work waiting to keep the whole building trade busy for many years, but unless existing burdens are removed it will remain waiting for ever. This is the logical result of our method of indiscriminate taxation of buildings and improvements.

The labourer, whether architect, builder or artisan, has very little chance in the vineyard without vines. As things are at present there is no inducement for anyone to touch building in any capacity whatever.

This is the hard, economic truth, consistent with the times in which we are permitted to exist.

E. G. Holtom.

### Is the Architectural Profession Overcrowded?

Sir,—I am glad to see my friend and successor, Mr. John B. Hector, challenging in your columns Mr. McArthur Butler's theory that the profession or art of architecture should be left to those who either do not want to be successful from a material point of view, or have no need to want to be such. I would not for a minute say anything which might be interpreted to mean that the calling of architecture is an El Dorado for one and all; but I do suggest that it should be open—that is, that it should afford an ample means of subsistence to all those most fitted for it and who can be economically absorbed in its pursuit.

Mr. Butler's idea is not original, nor do I think he would wish to claim originality for it. It is simply a piece of cant, bequeathed to us from Victorian days, which permeates the upper stratum of the profession and which some even honestly think they believe. It is cant, because, though all preach the theory, no one individual will willingly adhere to its practice, at any rate so far as he himself is concerned.

It is taken for granted, as an axiom, that architecture being an art its pursuit is pleasanter than that of most other callings, and that this is ample compensation for both practitioner and assistant. Architecture is certainly an art, but architecture as art forms only a very small part of the whole duties of an architect. Does it average 10 per cent., all types of buildings, all ordinary jobs of an ordinary architect taken into account? Then what of the other 90 per cent. or thereabouts? It is good interesting work, comparable with that of the engineer, surveyor, lawyer, sanitary engineer, and others, and should be at least as well paid, even though the 10 per cent. genuine creative artistic work be done tor the pleasure it brings and nothing more—an idea, however, I for one cannot support. This last is the frui of long training, let us hope of genius; and a public which will fritter away money on transient and idle luxuries should at least pay prcperly for this, if it wants it.

Certainly let those who enter or have entered the profession desire to be successful from a material, as well as from an abstract, architectural point of view. History does not show that the great architects and artists of the past were content to eschew the ordinary pleasures of the world, though many of them had their vicissitudes of fortune.

Chas. McLachlan.

### Surbiton Housing Scheme.

Sir,—In your last week's issue appeared a list of tenders for the above, in which my name was given as "architect." This list appeared without my personal knowledge, otherwise I should have stated that the houses in question were designed by the following four architects: (in addition to myself as Superintending Architect of the panel):—Messrs. Annesley H. Brownrigg, F.R.I.B.A., Horace Cubitt, A.R.I.B.A., Joseph Hill, F.R.I.B.A., and Anthony Wilson, Lic. R.I.B.A.

Martin S. Briggs.

### A New Suggested Scheme of Aid to Building.

Sir,—I think Mr. Frewen's scheme would require a far higher weekly rental than 15s. to become practicable, as the following estimated figures show:—

| | | | | | |
|---|---|---|---|---|---|
| Annual rent, at 15s. per week .. | | | | £39 | 0 0 |
| *Less* Outgoings— | | | | | |
| Rates, say, 17s. on £17 | £14 | 9 | 0 | | |
| Repairs, say, .. | 6 | 0 | 0 | | |
| Insurance .. .. | | 12 | 0 | | |
| Water rate, 10 per cent. of rateable value | 1 | 4 | 0 | | |
| Loan instalment .. | 10 | 0 | 0 | | |
| Collection, empties, &c. .. .. | *nil* | | | | |
| | | | | 32 | 5 0 |
| Net annual profit .. .. .. | | | | £6 | 15 0 |

This for London, leaving 1¾ per cent. interest on capital outlay of, say, £500, and nothing for depreciation. £6 per annum is an estimated average which would not be excessive for thirty years.

Gilbert H. Lovegrove, F.R.I.B.A., F.S.I.

### Wolverhampton Archæological Society.

The members of this society held their second excursion for the season on Saturday last, when the ancient Roman town of Wall was visited. Mr. J. P. Jones was the leader for the day, and on arrival at Wall he explained by means of a map and plans the situation of the town, and showed what had been done in the way of excavation. He said no work had been done on the site since 1914. After an inspection of the ruins the party visited the small museum attached to the site, where most of the articles found are now housed. It is a varied and interesting collection, and the two large plans of the part excavated enable the visitor to reconstruct some of the buildings. From Wall the party motored to Lichfield, where a number paid a visit to the Cathedral, while others inspected Dr. Johnson's birthplace. Mr. Jones then read a paper on Wall. At the conclusion the President (Mr. Gerald P. Mander) proposed a hearty vote of thanks to Mr. Jones for his paper and said it would be a good thing if the society could locate the precise situation of Pennocrucium, the next station on Watling-street, which was considered to be at Stretton, and suggested the co-operation of others in discovering it. Mr. Jones, in reply, expressed a wish that Great Britain, like other countries, should provide funds for the expert exploration of these buried evidences of remote times, so that our knowledge of the past might be increased.

**Retford War Memorial.** Mr. L. W. Barnard, F.R.I.B.A., Architect.

[This memorial is to take the place of an old market cross in the middle of the square of this old-fashioned town. About two hundred men from Retford fell in the war, and their names are inscribed on the lower panels, together with those of the two local regiments—the 8th Sherwood Foresters and the Sherwood Rangers. Other panels are filled with inscriptions showing the distances from Retford that the principal engagements took place, on the principle of "Roman milestones."]

# WESTMINSTER HALL ROOF AND THE WOODMAN.

By W. HARVEY.

THE largest of its type, the arched hammer-beam roof of Westminster Hall, constructed in 1399, contains some timbers of extraordinary dimensions perched up at dizzy heights above the floor of this old palace of the English Kings.

After more than five centuries of shrinkage and decay the larger of these great baulks still measure more than two feet in thickness, and in the hollows excavated in some of them by the death-watch beetle a full-grown man could lie completely hidden from sight. The connection between the general design of the mighty arched trusses and the use of the largest available timbers seems to have been of a specially intimate character, and it would be difficult to say to what extent the design was modified to suit the trees, or whether special search was made for suitable trees to fit the design. In all probability both elements interacted in shaping the roof as it was finally fixed in the Hall, for it is impossible to conceive of a work on so vast a span as 69 feet being carried into execution without some preliminary use of trial models and tentative projects.

In any case a fully thought out design must have been made, for where dimensions approach so nearly to the maximum possible it must have been necessary for each woodman to know exactly the proposed size and shape of each timber, as he would otherwise be unable to select the tree capable of containing it. Comparatively little sap-wood seems to have been permitted in the finished work, though an occasional length of waney edge on the hinder part of a timber demonstrates the builder's difficulty in obtaining the extreme dimensions out of heart-wood alone. Large as the timbers are, they are now seen after centuries of seasoning under the influence of the circulation of air and smoke rising from the floor of the Hall and escaping from the two fumeroles, or open lanterns, which were originally perched upon the ridge of the roof—conditions favourable to complete desiccation and to a maximum of shrinkage of the fibres.

At the present time the dry and hollow-cheeked condition of the timbers and the gaping of their joints, wherever these embody any splay cutting across the fibres, show that a very considerable amount of shrinkage has taken place since erection, and the original dimensions across the grain may well have exceeded the present figures by something like the 5 per cent. allowed for the shrinkage of oak in its first 26 months of seasoning. If this were the case the timbers, when first converted, must have been approximately 8 or 10 per cent. wider than at present—2 ft. 1 in. now, having been 2 ft. 3 in. or more in the green trunk.

It seems probable from evidence in the Hall itself that the foot measure of Richard II was practically identical with that of our own day, and, in that case, the round figure of 2¼ feet may have been made the woodman's standard in his search for suitable trees. Wall posts, hammer beams and hammer posts each contain the whole thickness of the truss in one timber, and are from 21 to 22 feet in length.

The hammer beams and posts are larger in section than the wall post, as some plank filling was inserted between that member and the wall to make out its apparent breadth, whereas the more active mechanical functions of the other members demanded the use of solid material, for the hammer beam—too small in spite of its great bulk—has bent considerably under its load. The hammer posts presented an additional difficulty, as they were required to be furnished with a spur to start the curve of the upper curved strut. Allowing two corners of the post to contain some sap wood, and to penetrate to the bark of the tree, the net size of the log would still require a girth of 10 feet 3 inches at a height of 21 feet from the butt.

The collar beam, 40 feet in length, could not be obtained in one piece, and was formed of two twin beams, each of half the thickness of the truss, and in its present shrunken state is still fully 2 feet in depth at the centre of the span. A strong camber still exists in these beams, as although they may have flattened with time, the apex of the great arch rib still supports their central points. The camber was probably adopted quite as much for the practical reason that it is easier to find a slightly crooked tree than a perfectly straight one, as for any artistic purpose, and even if a maximum of 10 inches of camber is allowed, trees of exceptionally straight growth were required to contain the beams. The trees to contain these 40 feet beams would have

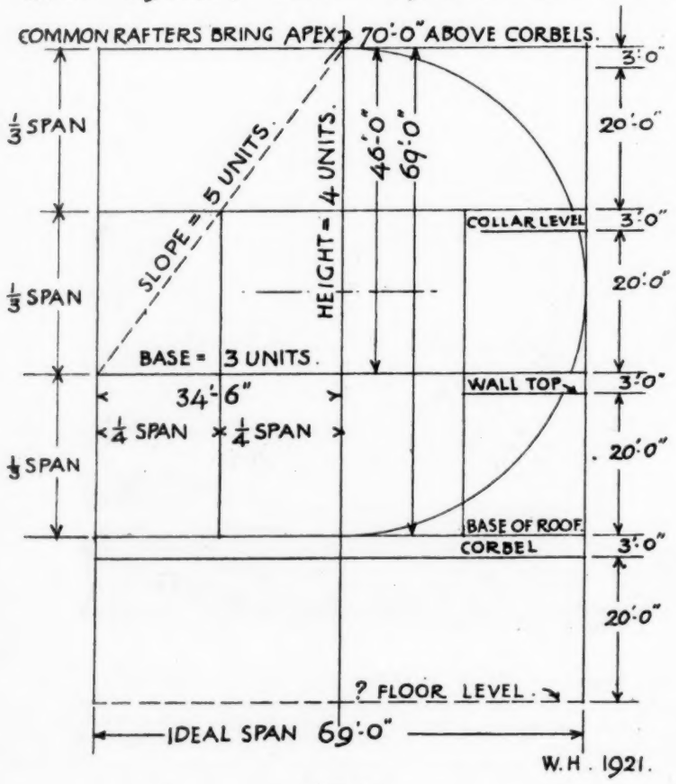



FIG. 1.

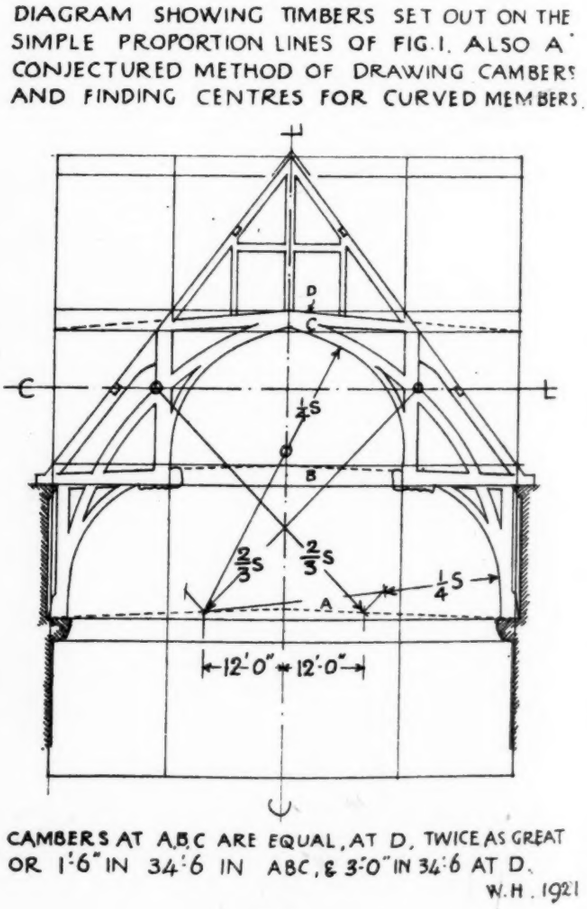
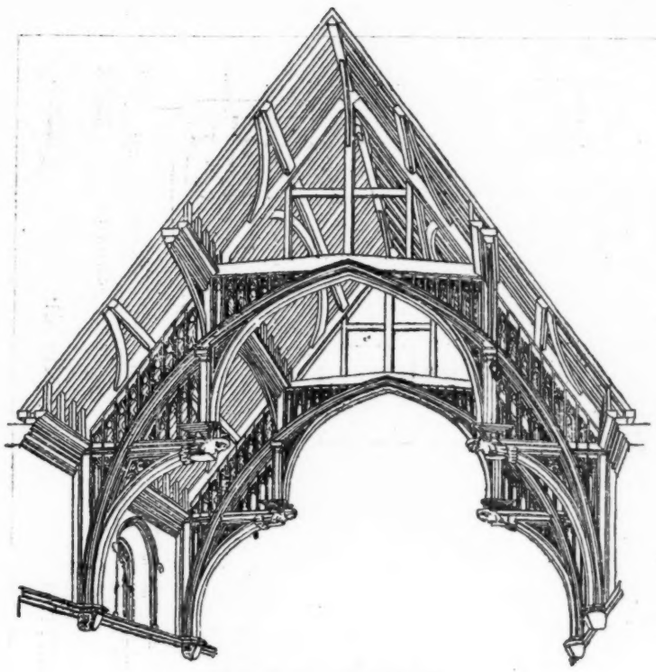


DIAGRAM SHOWING TIMBERS SET OUT ON THE SIMPLE PROPORTION LINES OF FIG. 1. ALSO A CONJECTURED METHOD OF DRAWING CAMBERS AND FINDING CENTRES FOR CURVED MEMBERS.
D
C
½S
S
⅔S
⅔S
¼S
A
12'-0"
12'-0"
CAMBERS AT A, B, C ARE EQUAL, AT D, TWICE AS GREAT OR 1'-6" IN 34'-6" IN ABC, & 3'-0" IN 34'-6" AT D.
W.H. 1921

FIG. 2.



**Westminster Hall Roof.**

Restored as shown in proportion diagrams 1 and 2.

to be 3 feet diameter 20 feet from the butt, and 2 feet diameter 40 feet up. The curved timbers of the arches and struts were not individually of such magnitude, as each arch was of composite construction, the full thickness of the truss being built up in three pieces.

Under the conditions of competitive tender and contract prevailing at the present day, the architect's drawings reproduced by photo-lithography would convey the necessary information as to size of material, and it is possible that multiple copies of the design were drawn by hand for the instruction of men engaged in procuring the timber for the new roof in the fourteenth century. On the other hand, some indications exist in the roof that a system of mnemonics was embodied in the design of the trusses by which their pattern could be learnt by heart and reproduced from memory in any forest glade by a woodman furnished with a measure equal in length to the span of the Hall.

It is reasonable to suppose that the original pitch of the roof was equal to that of the stone gables at the ends of the Hall, which still, in spite of repair and restoration, probably retain their general shape. The slope of the roof would then be seen to have been the simplest possible right-angle triangle to set out in practice, that which has a base of 3 to a height of 4 and hypotenuse 5. The geometrical restoration of the truss elevation now becomes a possible and reasonably probable matter of conjecture. By measuring the present length of each main timber—as may be done by any reader of the admirable "Blue Book" on the present repair of the Hall—and reassembling them to scale in a diagram with outlines to the 3, 4, 5 pitch the proportions of the old roof can be drawn and checked against such of its details as may be trusted to retain their original character. The hammer beams, which at the present time actually bend and droop into the Hall, were probably given an upward camber to match that still to be found in the great collar.

It is necessary to give them just such an upward slant if the lengths of timbers are to agree in the geometrical diagram. Reliable evidence for this original rise is obtained by measurement of bars in the spandril between hammer beam, hammer post and great arch rib, this tracery having been inserted panel-wise in grooves in all these timbers when the roof was first put up. Except for shrinkage of the material, the tracery bars have retained their original shape, and have merely slid one upon another in accommodating themselves to the slow downward droop of the hammer beams.

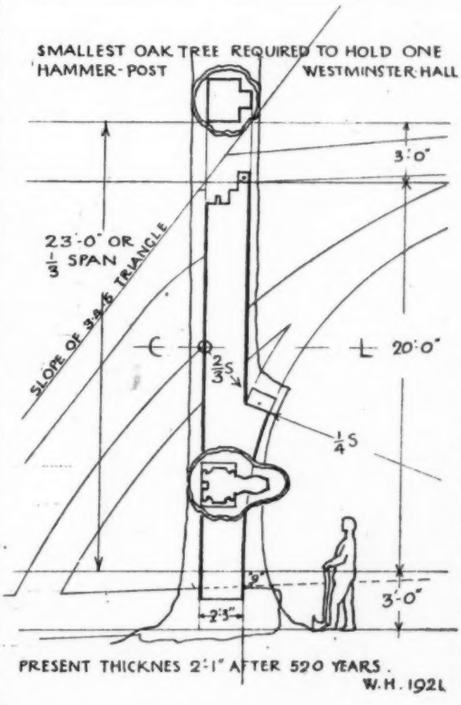



Fig. 3.

The original curves of the great arch ribs are somewhat less susceptible of proof, but four points in each arc are fixed by the junctions of arch rib with wall post, hammer beam, hammer post and main collar, and since the known positions of three points establish the curve of a circular arc, the fact that a fourth point is also included is some indication of the accuracy of the conjectured sweep.

On examination the diagram made in the manner described (Figs. 1 and 2), will be found to fall within very simple geometrical parallels. The span of 69 feet is divided into four equal parts to obtain the positions for the hammer posts, and into three equal parts for the three main divisions of height, for the height from corbel level to apex of principal rafters is equal to the span. The cambers of hammer beam and collar are included within horizontal parallels 3 feet apart, which render their setting-out perfectly simple and facilitate the placing of centres for striking the curves of the arch with radius exactly two-thirds of the span. One quarter of the span seems to have been used for the inner radius of the minor curved struts, though the present distorted state of the roof, and of these members in particular, makes it impossible to come to any positive conclusion. The positions of the purlins at the centre of the height of the roof, and the points of junction of the great arch rib and the hammer post at this level, seem significant of definite intent to construct the roof upon geometrical proportions, and if, as seems probable, these conjectural diagrams embody the designer's method of setting-out, they certainly have the merit of being unforgettable.

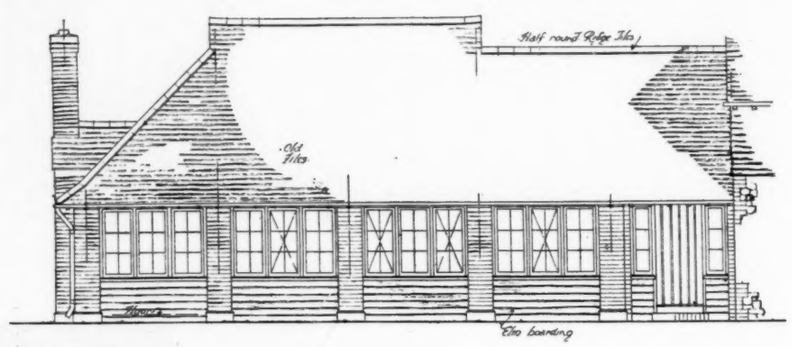
Practically every main division can be expressed in terms of the span, and the divisions of height over the interlocked tips of the common rafters add up the allotted age for a man: 3 score, thrice 3, and 1.

As has been seen, timbers now 2 feet 1 inch in thickness must have approached the dimensions $3\times3\times3=27$ inches when the trees were being selected and converted. The specially simple roof slope adopted gives a rise of 3 feet for the width of 27 inches and settles the parallels for setting-out the camber; so if anyone could forget the lucky numbers he would be able to find his way to them again by use of the roof pitch.

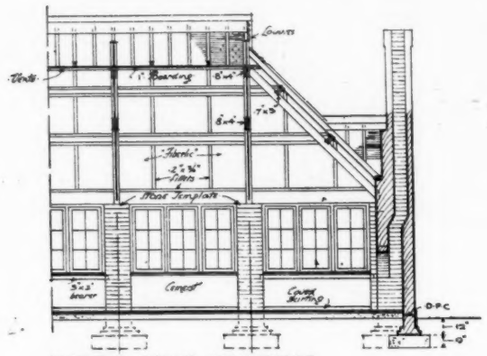
### The Royal Sanitary Institute.

At an Examination in Sanitary Science as applied to Buildings and Public Works, held in London on July 29 and 30, 14 candidates presented themselves, and the following 2 candidates were awarded certificates:—Coe, V. R., London; Reeve, H. A., Norwich. At an Examination for Inspectors of Nuisances held in London on July 29 and 30, 41 candidates presented themselves, and the following 15 candidates were certified, as regards their sanitary knowledge, competent to discharge the duties of Inspector of Nuisances under the Public Health Act, 1875:—Bell, F. R., Southsea; Groom, A. C., W. Ealing; Lunn, G. H. V., Walthamstow; McLynchy, R., Exmouth; Morrison, Helen M., Enfield; Naughtin, T. H., New Southgate; Newbury, G. F., Bristol; Penn, G. H., Sawbridgeworth; Smart, C. B., Southsea; Smith, Elsie N., Norwich; Swain, F. W., Banbury; Tyler, A., Bristol; Tyler, R. J., Sidcup; Warner, P. A., Godalming; Waters, Blanche, London.

# EXTENSION to CLUB PREMISES for the LIMPSFIELD "COMRADES"

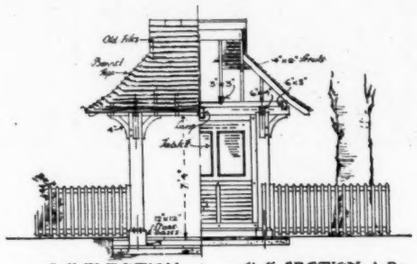



ELEVATION to CRICKET GROUND



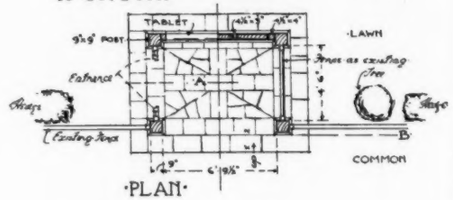

PART LONG^L SECTION

MEMORIAL GATEWAY

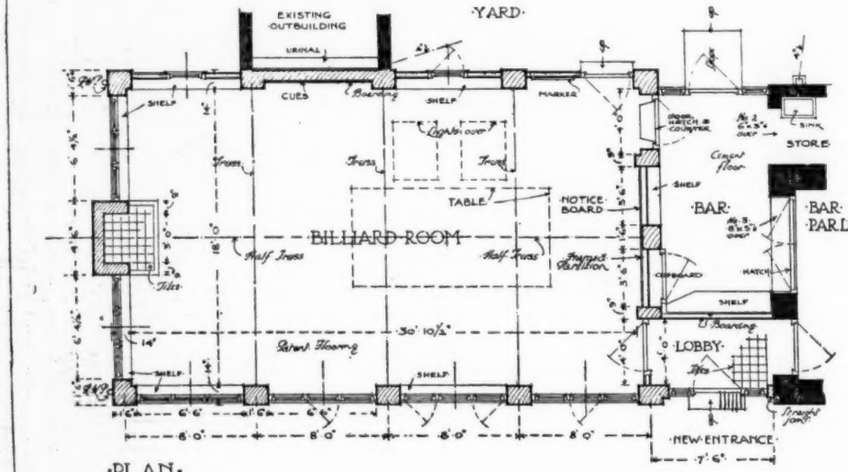



Half ELEVATION to COMMON

Half SECTION A-B

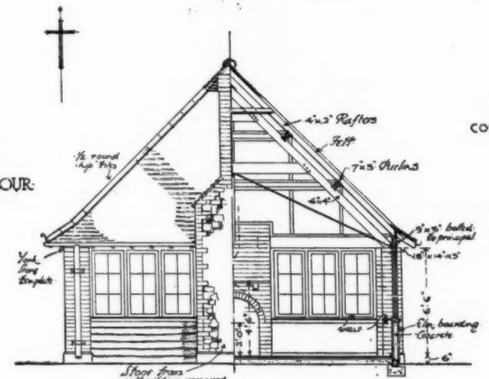



PLAN



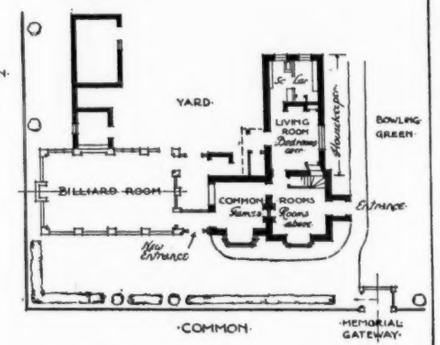

PLAN

MEMORIAL GATEWAY 1/2 Oak. TABLET of Portland Stone in Oak Framing supported by Brick Hogging in Oak. FLAGGING and BASES 1/2 Portland Stone.




Half WEST ELEVATION

Half CROSS SECTION




BLOCK PLAN

H. A. Gold A.R.I.B.A. 44 BEDFORD ROW W.C. 1910 DEC.

**Extension to Club Premises, Limpsfield.**—MR. H. A. GOLD, A.R.I.B.A., Architect. (*See p.* 224.)

# "THE WORLD AS WE FIND IT."

By G. Maxwell Aylwin.

Every-day life is a fairly cut-and-dried affair for most of us. Each hour finds us subconsciously obeying some unwritten law, following some time-worn custom, or even slaving under some convention the origin and purpose of which have been long forgotten. It is the penalty of corporate life, and balancing one thing with another we get along passing well; only occasionally are we conscious of any great inconvenience.

The stump orator at the street corner has, of course, unearthed the whole of life's anomalies, and is very anxious for us to experiment with the brand new ones of his own adoption. But we have no time for him, and pass him by with a smile to bear cheerfully the little things that jar, and to cudgel our brains how best we may smooth them over, while thanking the gods for the order and uniformity which convention imposes upon us.

The true philosopher speaks with a more welcome voice. While pretending to pull down our card castle he makes us stop and think, to co-ordinate the things we ordinarily accept without question.

Most of us, therefore, have welcomed as they have appeared each of Professor Lethaby's articles on "Modernism and Design." Their vigour arrests us, invites our criticism, and even excites our violent opposition at times. We have had to pause, to catalogue our doctrines, to search back for our motives. Having satisfied our conscience we go on much as before, though with renewed confidence in our own sincerity.

The eighth article of the series, "The Mystery of Mouldings," is perhaps the most vigorous of all, and as a consequence is possibly the most inciting to combat. We modern architects are rather proud of our mouldings. As students we spent a long time measuring up old details and drawing them out faithfully, and our instructors patted us on the back and bid us carry on with the good work. We did, in fact, to some extent learn how an effective moulded feature appeared in conventional line section, how to translate three dimensions into a two-dimension diagram. Later, we began to imagine our own solids and translate the thought to the drawing board, so that the craftsman might reproduce our conception in solid material. We have consumed miles of detail paper, filled a whole chest of drawers with full-size details of a single job, hung each in turn upon the wall, fussed over and altered them, and examined the result in execution. We have taken note of where our line diagram has failed to produce effect in the solid, and more often than not we have gone away fairly satisfied with results.

We are therefore naturally shocked when we are told that "Mouldings are not essential to even a highly developed and ornate type of architecture" (by the way, is not "type" getting very near the much-abused word "style"?), and the draughtsmen (or "drawing clerks!") cry "Shame!" in unison to hear that the writer "has no belief in any mouldings or decorations unless they are designed by the artists who work them—masons and joiners." Consequently we gird up our loins, and, did we live three or four thousand years ago we should probably descend on Gower-street with an axe; living in a more comfortable, if less thorough, age, we instead take up the pen in defence of our mouldings.

As a preface, let us revert for a moment to the every-day life parallel. Every morning millions of men assume various conventional garments, including a collar and tie, a three-piece suit, etc. All these things they accept without question, though, at any rate during the recent heat wave, a tennis shirt open at the neck, football shorts, sandals, and no coat, would provide an equally serviceable costume and one far more comfortable. They do not recall that the collar and tie are relics of an age when buttons did not exist, and when the loose neck of the shirt was fastened with a kerchief over which it loosely fell. They do not claim that this is a tyranny which, being unessential, should be taboo. They know that if they revolt their fellows will avoid their compartment in the train, their neighbours will discontinue calling on their wives, and their friends will cut them in the street; they would, in fact, become foreigners in their own country.

Now, are there not very similar phenomena relating to architectural design? Of course, mouldings are not essential to a building! The writer referred in a recent article to the Kodak Building. Throwing convention overboard this building undoubtedly has acquired a brazen beauty of its own, but it is alone and a stranger in the crowded street. If the buildings could speak in their own tongue one could imagine Empire House saying to India House, "Just look at that bold hussy Kodak! She is absolutely indecent without a cornice. Why, even the Opera House dresses after a fashion, though she is, of course, not quite our sort. Do let us call on the Morning Post and the Waldorf."

And so, just as we naturally assume our three-piece suit in the morning—waistcoat, jacket and trousers—we also design our three-piece façade—pedestal, column and entablature—for that is still the dominant motif of most of our designs. We have the plinth corresponding to the pedestal base, the lower story to the pedestal die, the string course to the pedestal cap. Whether we actually express the column or not, we set aside two or three stories grouped together to read as the dominant division like a column. We have our entablature, whether minus a frieze or architrave, or both; or whether we treat a whole story as a frieze. Above this, if we want it, we have an attic story grown from the classic balustrade. Mouldings supply the traditional means of defining the parts, and the architect who conceives their disposition must govern the means of their emphasis in light and shade.

Of course, the artists who work the mouldings and decorations—masons and joiners—could design them! I know a whole street at home designed by a builder, and I see his rotten mouldings, carved caps, and dog-toothed painted bargeboards in my worst nightmares. Builders' mouldings are a by-word, and, even though we may be to some extent to blame for so long starving the craftsman's initiative, there is something rather fine in the idea of a single master-mind conceiving the minutest detail which helps to build up the complete entity.

We cannot be progressive if we are for ever pulling down and starting again, and we cannot believe that Professor Lethaby would himself tolerate such destruction. We even suspect him of quietly pulling our indignant legs a little. Those diagrams of his are surely the very "confidence trick" of which he accuses the defenders of modern mouldings.

However, we look forward with avidity to a further addition to the series. We have had to think hard, and food for thought is a necessity, even when a little rich and indigestible; otherwise we may be given to a rather too ready acceptance of the world as we find it.

**Limpsfield Club Premises.**

**Extension to Limpsfield Club.**—Mr. H. A. Gold, A.R.I.B.A., Architect. (*See p.* 224.)

## Leading Contents.


| | PAGE |
|---|---|
| ARCHITECTURE AND TRAVEL | 215 |
| NOTES | 216 |
| GENERAL NEWS | 218 |
| CORRESPONDENCE | 219 |
| WESTMINSTER HALL ROOF AND THE WOODMAN | 220 |
| "THE WORLD AS WE FIND IT" | 223 |
| EXHIBITION NOTES | 224 |
| BOOKS | 229 |
| THE VICTORY SCHOLARSHIP | 232 |
| HOUSE PLANNING AND FITTING | 232 |
| HOUSING AND TOWN-PLANNING NOTES | 232 |
| THE BUILDING TRADE | 233 |
| THE INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY | 234 |
| NEW INVENTION | 236 |
| COMPETITION CONTRACTS, ETC. | 238 |
| PROPOSED NEW BUILDINGS AND OTHER WORKS | 240 |
| PRICES CURRENT OF MATERIALS | 241 |
| CURRENT PRICES FOR BUILDING WORK IN LONDON | 242 |
| PATENTS | 243 |
| TENDERS | 243 |


## ILLUSTRATIONS.

### The Church of St. Hilda, Hartlepool.

Our illustration of the Church of St. Hilda, Hartlepool, is from an exhibit in this year's Royal Academy, and shows how the architect, Mr. W D Caröe, F S.A., F.R.I.B.A., is adding to this building.

### Edinburgh School of Art Students' Work.

We illustrate this week some work by the architectural students at the Edinburgh School of Art. Mr. G. Washington Browne, R.S.A., is head of the Architectural Section of the School. The works illustrated are a stone screen to replace the iron railings at the Royal Bank of Scotland, Edinburgh, by Mr. Frank Wood, Miss H. A. C. Elder, and Mr. J. Connal Pringle; pencil drawings of emblems, by Mr. W. A. Muir; and pencil drawings of shields, by Mr. W. A. Muir.

### Cinema at Brighton.

The "Regent" Cinema, Brighton, which was recently opened, has been built to the designs of Mr. Robert Atkinson, F.R.I.B.A. Other illustrations of this picture theatre were given in our issues for June 4, 1926, and January 7, 1921. The theatre, has seating accommodation for 3,000 persons, and the winter garden for about 1,200. Including the café, restaurant and foyer, the building will accommodate a total of 5,000 persons at one time. The decorative panels in the foyer are by Mr. Walter Bayes and Mr. Walpole Champneys, while the decoration of the proscenium has been carried out by Mr. L. Preston, A.R.C.A., of the Brighton School of Art. Special lighting effects are obtained by a new system of multi-coloured lights operated from the side galleries.

### Extension to Club Premises, Limpsfield.

This branch of the "Comrades" obtained last year a house situated in very beautiful surroundings on Limpsfield Common. The

**Memorial Gateway, Limpsfield Club.**
Mr. H. A. GOLD, A.R.I.B.A., Architect.

main objects aimed at in the arrangement of the extension were (1) the maximum accommodation obtainable with limited funds; and (2) a building merging as far as possible into the surroundings. Owing to tree pruning, the latter object has been largely discounted for the present. The roof is covered with old tiles, and is composed of framed trusses, purlins, and common rafters, with felt laid between the latter and tile battens. Brick piers, 18 in. by 14 in., support the trusses, and the bays between are filled in with windows on the fronts overlooking the Common (south and west). The window backs are of thin concrete cast *in situ*, protected externally by elm boarding fixed to vertical battens. Internally, the roof is finished with "Fiberlic" sheets fixed with fillets nailed to rafters; the window backs are cement rendered and distempered. The whole of the exposed woodwork is stained dark brown and flat varnished. The floors are solid, of 4 in. cement concrete and 1 in. cement rendering; the floor to the billiard room, together with coved skirting, is finished with patent composition laid by Messrs. Langham, of Forest Gate. The extension was carried out at an approximate cost of £800.

The memorial gateway, which was recently opened, is arranged to allow the tablet to be viewed from the Common. The materials are oak and old tiles, with Portland stone for the tablet, bases, and flagging. Messrs. A. Burslem & Sons, of Tunbridge Wells, executed the tablet and supplied the bases and paving. The cost of the gateway was approximately £175.

The architect is Mr. H. A. Gold, A.R.I.B.A., of 14, Bedford-row, W.C.1, and Messrs. A. Brasier & Son, of Limpsfield, are the builders.

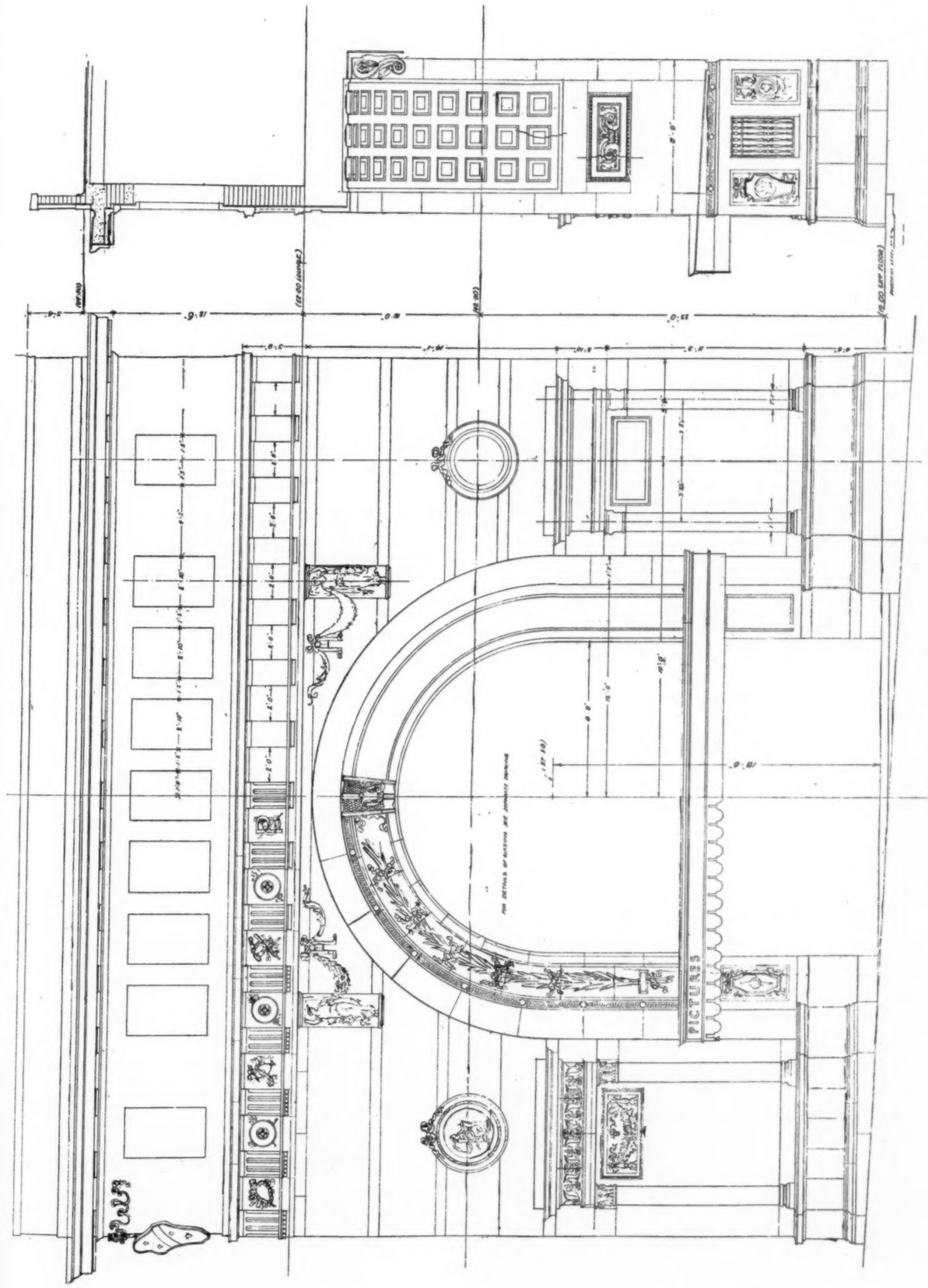
## EXHIBITION NOTES.

### Strang Memorial Exhibition.

This exhibition of 80 etchings by the late William Strang, R.A., is interesting in showing the advantage to the artist which lies in identifying his method with that of a past master, such as Holbein. Founding his etchings on the treatment employed by Holbein, William Strang derived from it the value which lies in moving on acknowledged highways of art. Though an observant and skilful draughtsman, there cannot be claimed for his work a level at all equal to Holbein, and it is rather to the identification with that master's style than to any parallel penetration that we accord him recognition. This is not so much in the way of criticism—for there is much to commend in these etchings—but to suggest that a like advantage is open to other craftsmen. It is no bad thing to found one's work on a master whom we admire; in fact, there is much advantage in it. Raphael, adopting the manner of his master, Perugino, was sustained and disciplined thereby until his nature, passing beyond such needs, could flower freely on its own roots. The mantle of Elijah thus sensibly worn would save us from much vagary and commonplace. It is a good thing for a student to study and express himself through the manner of his master, and much better than acknowledging none. It is a part of that best equipment of the artist or any other—a humble spirit. The traditionalist may go too far, but his blunder is not so bad as his who acknowledges no school or master.

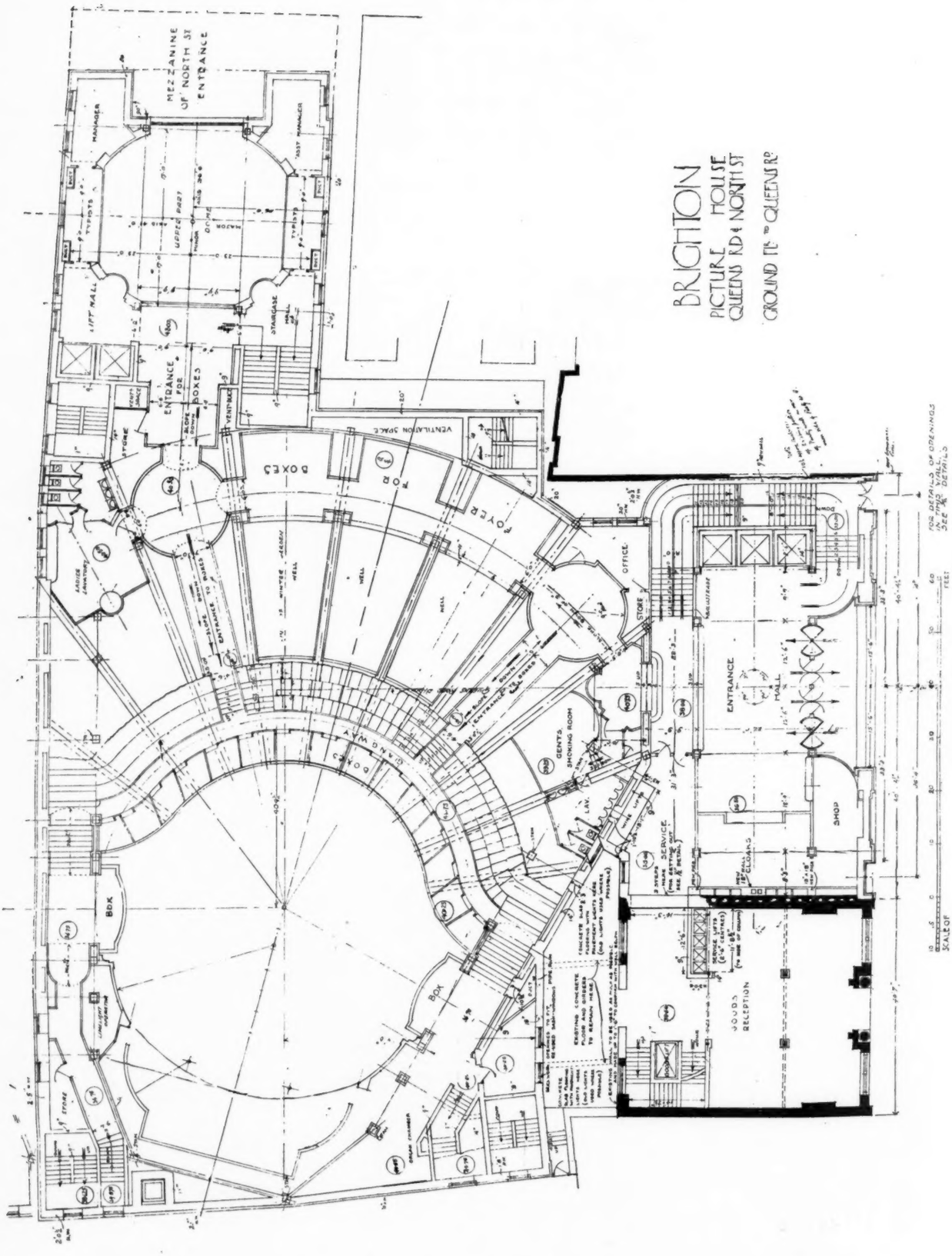
Edinburgh College of Art Students' Work.

**The Royal Bank of Scotland, Edinburgh: Design for a Stone Screen to replace the existing Iron Railing.**
By MR. J. CONNAL PRINGLE.



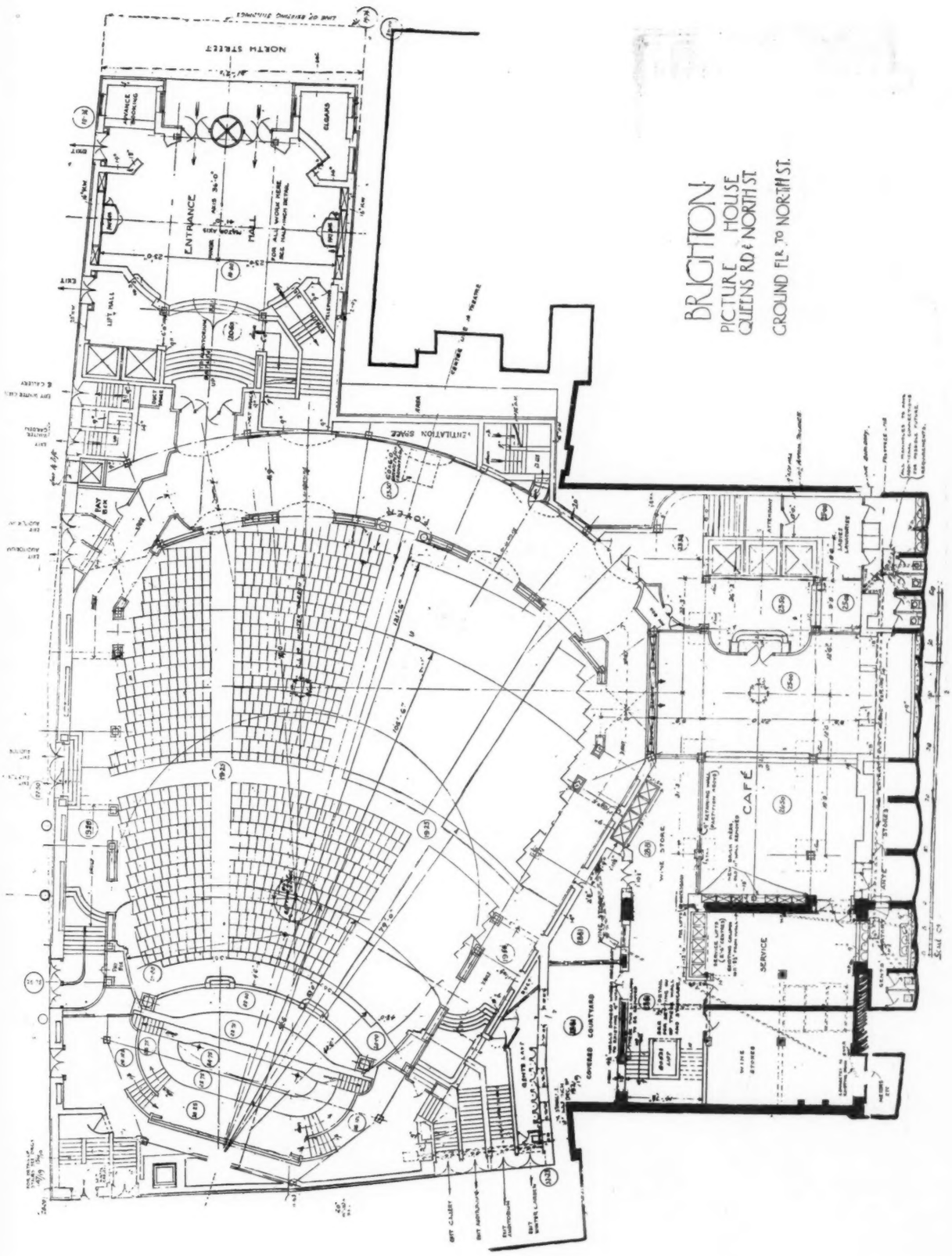

**The "Regent" Cinema Theatre, Brighton.**

Mr. Robert Atkinson, F.R.I.B.A., Architect. (*See p.* 224.)



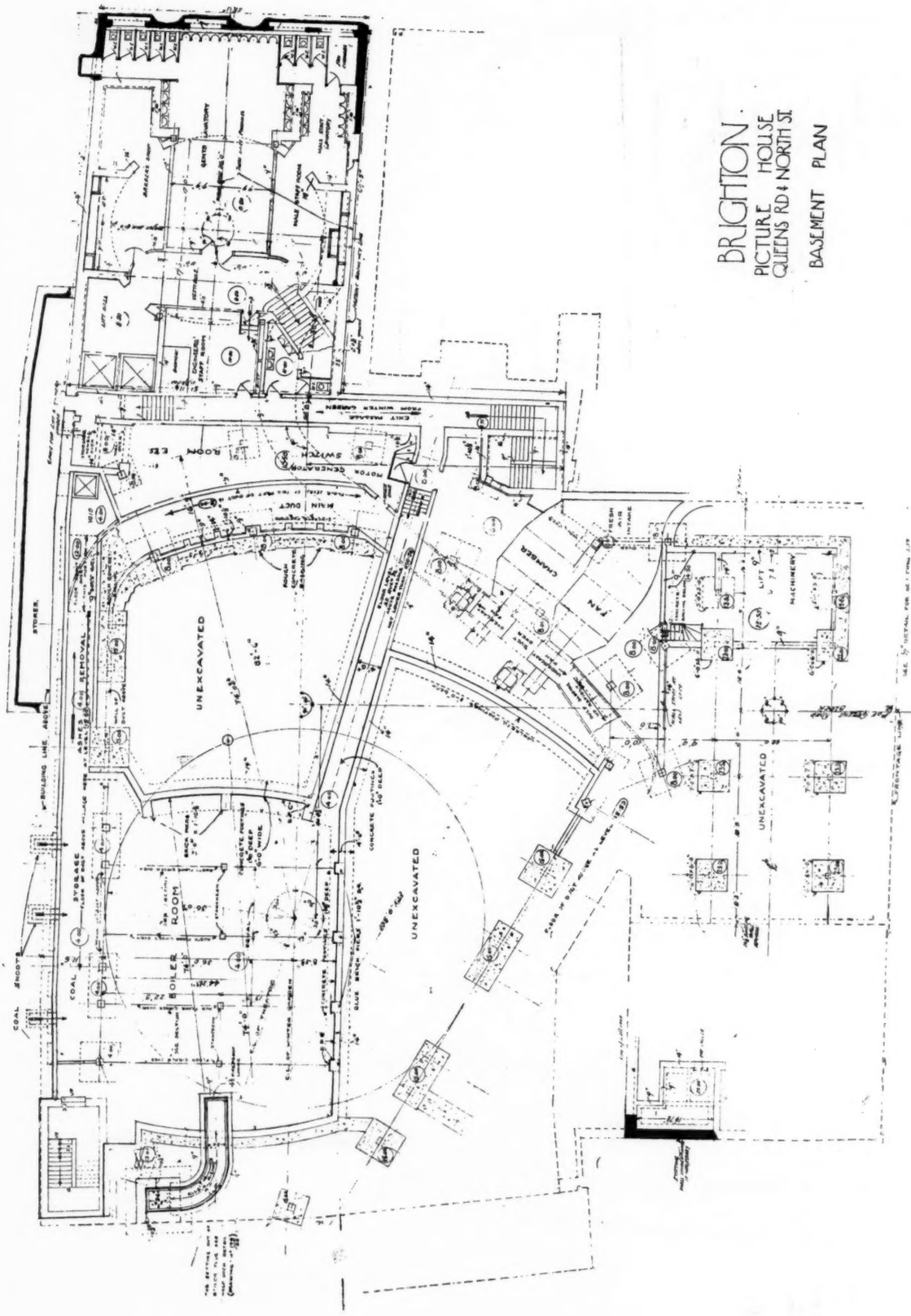

**The "Regent" Cinema Theatre, Brighton.**

MR. ROBERT ATKINSON, F.R.I.B.A., Architect. (*See p. 224.*)



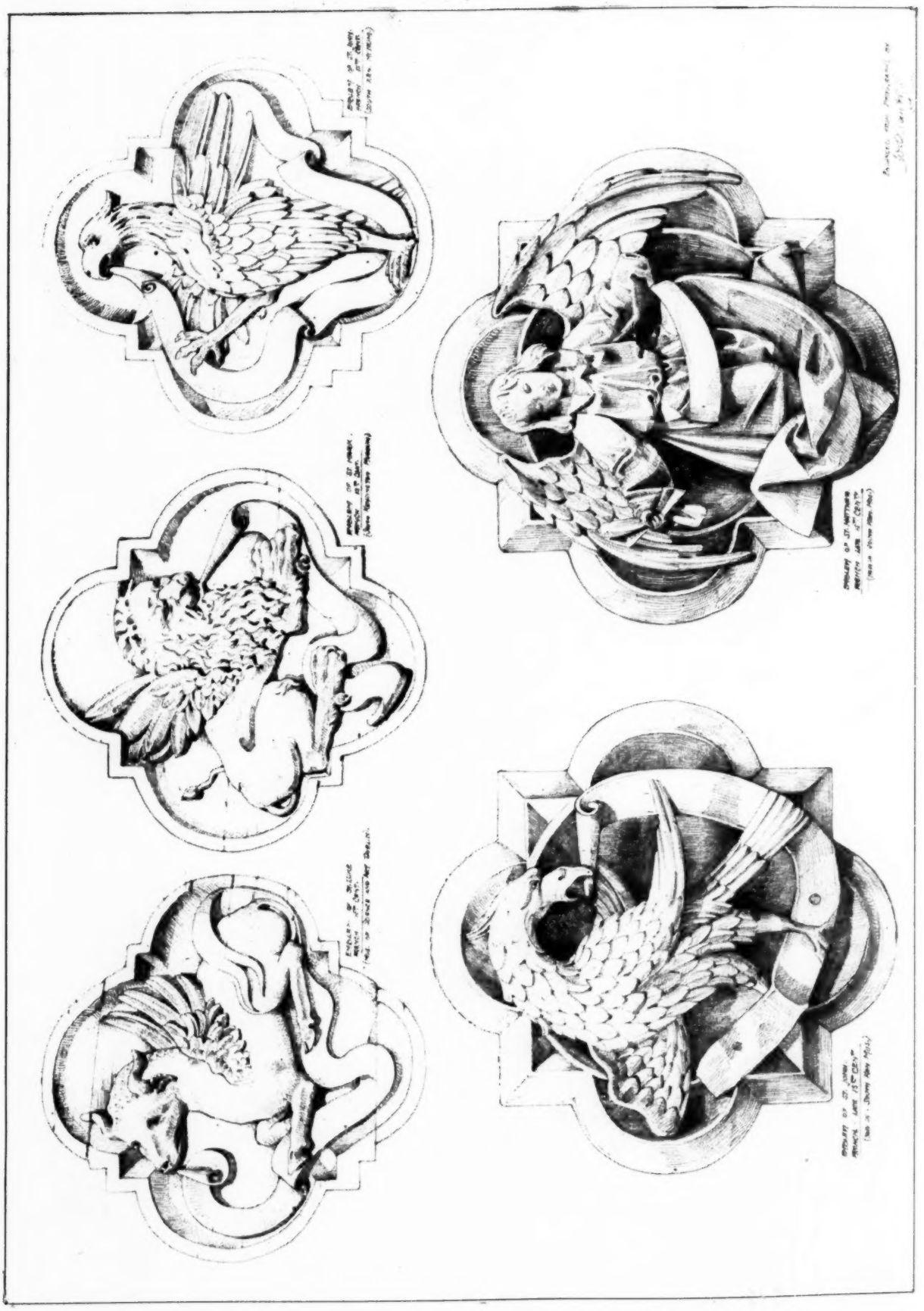

**The "Regent" Cinema Theatre, Brighton**

Mr. Robert Atkinson, F.R.I.B.A., Architect. (See p. 234.)




**The "Regent" Cinema Theatre, Brighton.**

MR. ROBERT ATKINSON, F.R.I.B.A., Architect. (*See p.* 234.)



PENCIL DRAWINGS OF EMBLEMS, BY MR. W. A. MUIR.
ARCHITECTURAL STUDENTS' WORK, EDINBURGH SCHOOL OF ART.

PENCIL DRAWINGS OF EMBLEMS, BY MR. W. A. MUIR.

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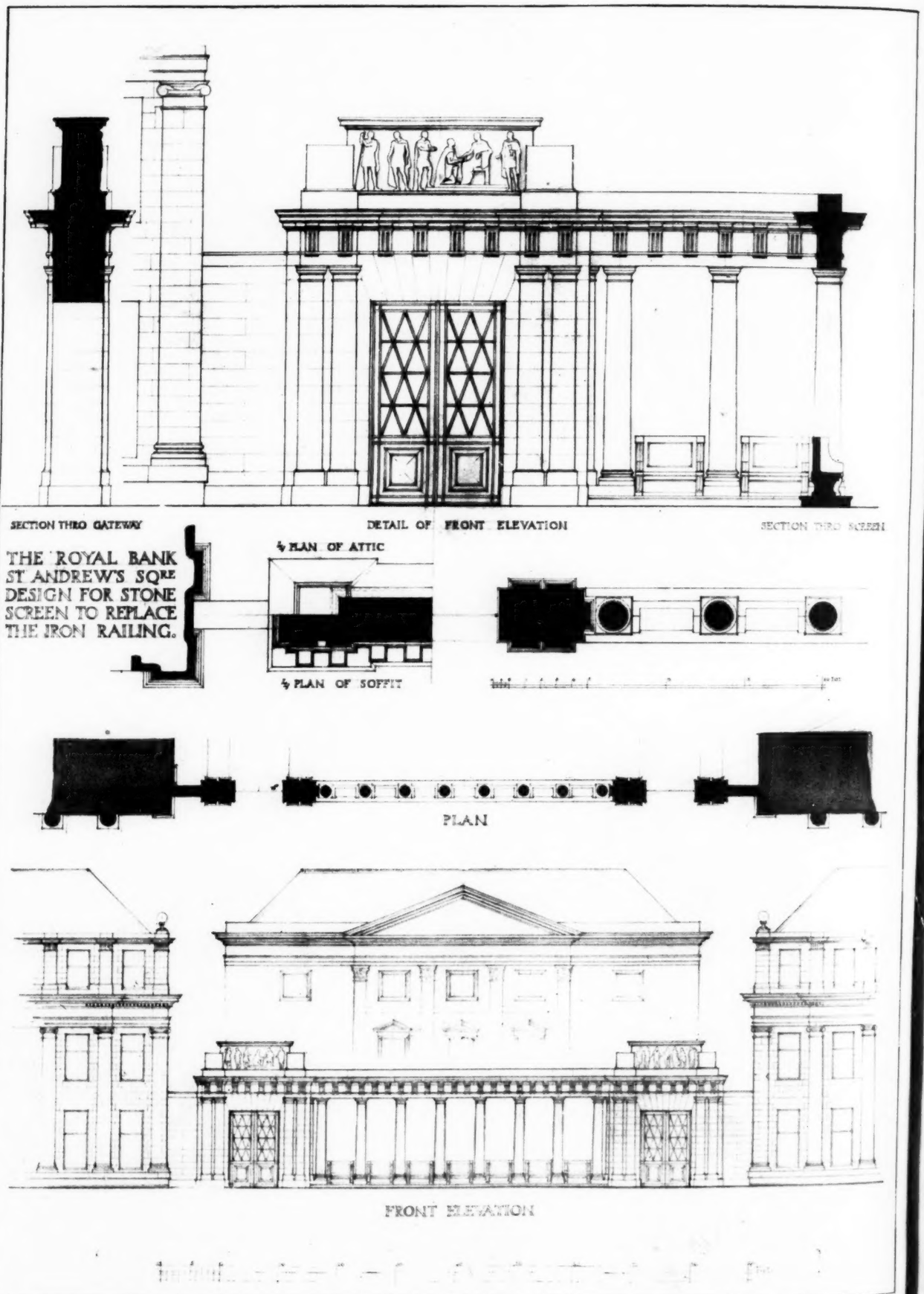
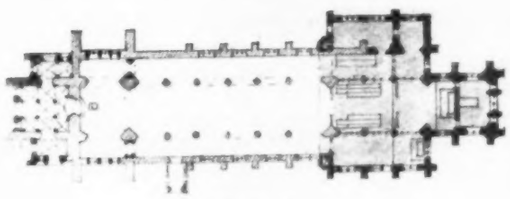



DESIGN BY MISS H. A. C. ELDER.

ARCHITECTURAL STUDENTS' WORK, EDINBURGH SCHOOL OF ART.

R.A. EXHIBITION.

CHURCH OF ST. HILDA, HARTLEPOOL. Ma

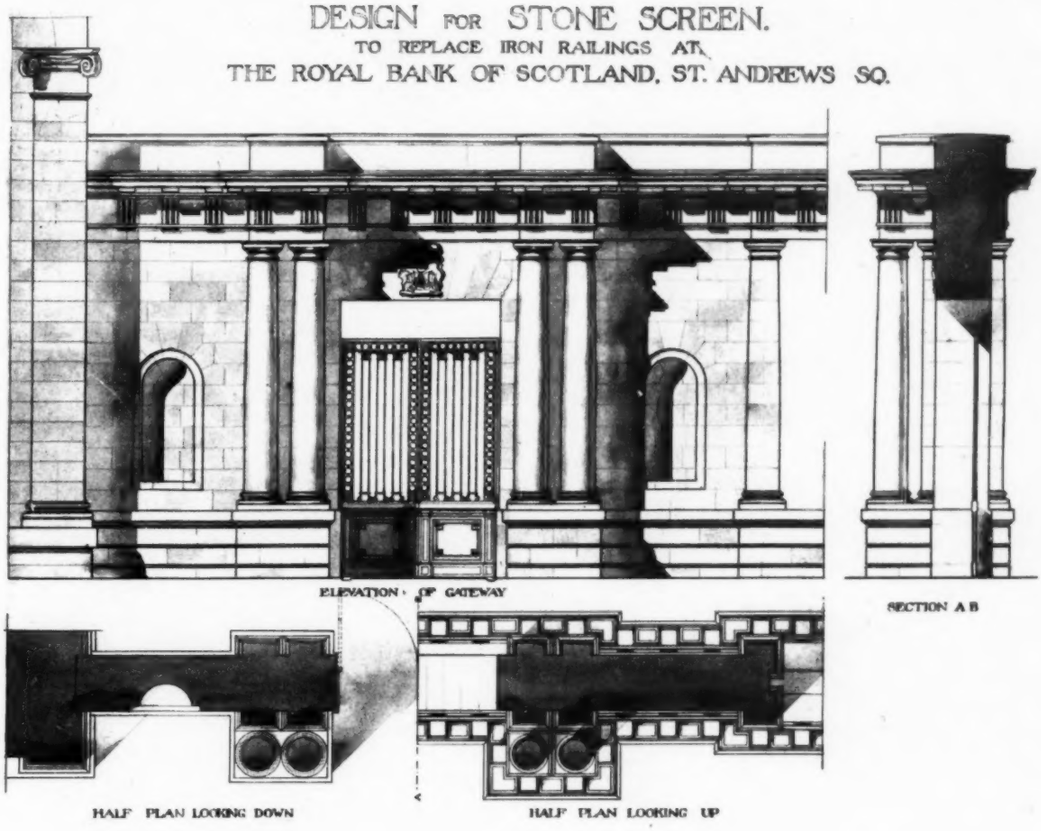


GROUND PLAN

HARTLEPO[illegible] MR. W. D. CARÖE, F.S.A., F.R.I.B.A., ARCHITECT.

# DESIGN FOR STONE SCREEN.

TO REPLACE IRON RAILINGS AT
THE ROYAL BANK OF SCOTLAND, ST. ANDREWS SQ.



ELEVATION OF GATEWAY

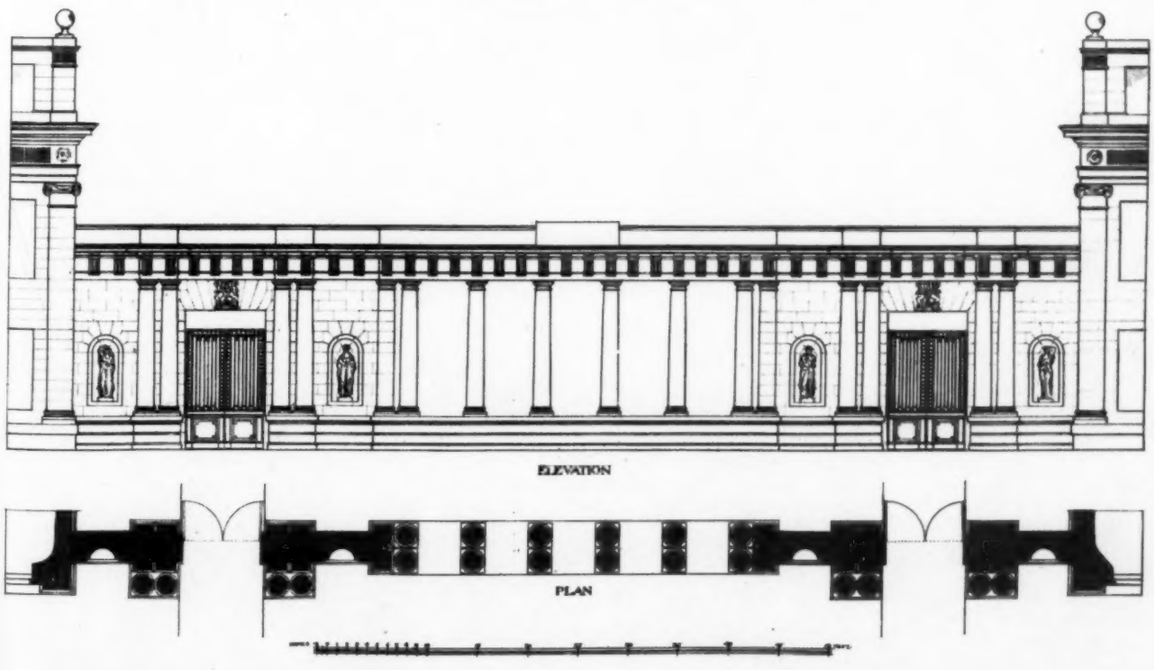
SECTION A B

HALF PLAN LOOKING DOWN

HALF PLAN LOOKING UP

# DESIGN FOR STONE SCREEN

TO REPLACE IRON RAILINGS AT
THE ROYAL BANK OF SCOTLAND, ST ANDREWS SQ.
ALTERNATIVE TREATMENT.

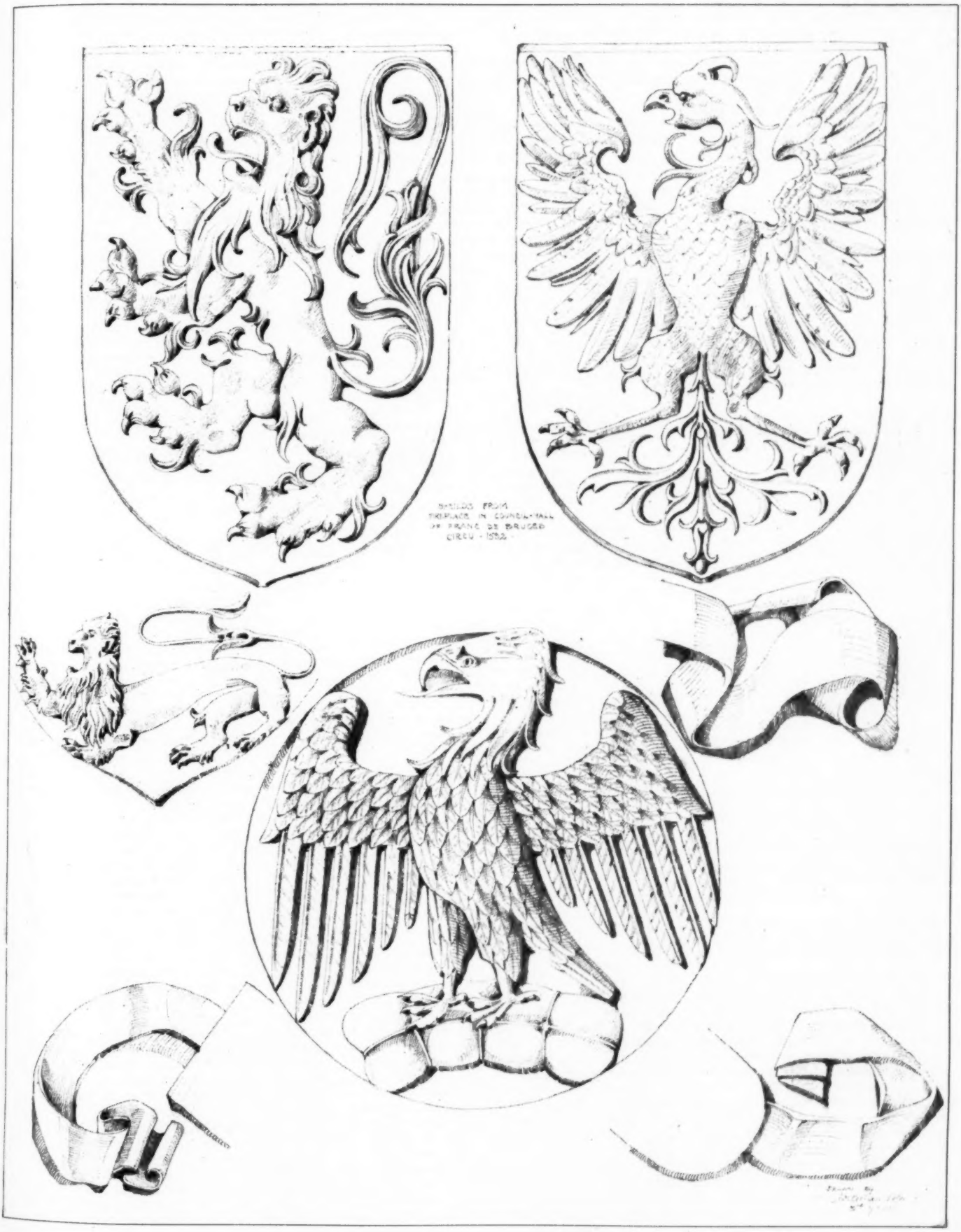


ELEVATION

PLAN

DESIGN BY MR. FRANK WOOD.

ARCHITECTURAL STUDENTS' WORK, EDINBURGH SCHOOL OF ART.




PENCIL DRAWINGS OF SHIELDS, BY MR. W. A. MUIR.

ARCHITECTURAL STUDENTS' WORK, EDINBURGH SCHOOL OF ART.

## BOOKS.

*Engineering Construction*: Part 1, In Steel and Timber; Part 2, In Masonry and Concrete. By W. H. WARREN, LL.D. London: Longmans, Green & Co. Price: Part 1, 30s.; Part 2, 36s.

The modern tendency to refer all practical building operations to the standard of economy in first cost creates a serious burden for the designer, who is required to produce work which will be amply strong for its purpose and yet admit of a possible commercial return on the outlay. Under these circumstances it is impossible to trust to rule-of-thumb methods, even when derived from long experience, and the engineer is driven to make use of an elaborate and specialised theory involving laboratory investigations and mathematical calculations as the basis of structural design.

Mr. W. H. Warren has composed his treatise on engineering construction from the theoretical side by what is usually admitted to be the correct scientific method, using the tests of the laboratory as a foundation and arriving at the proportions of the required design by means of mathematical formulæ. The introductory chapters are, therefore, devoted to the description of materials, their composition, and the machinery used for ascertaining their strength and properties. Tables and graphs giving the results of tests of various kinds abound throughout the work. The chemical structure of steel is illustrated by a series of micro-photographs showing the characteristic particle of ferrite, cementite, pearlite, austenite, and other ingredients of steel used in construction. "All rolled girders, channels, bars, rivets, plates, axles, tyres, &c., consist," it is stated, "of ferrite and cementite interstratified as pearlite with an excess of ferrite."

Timber as a material of construction is also dealt with in considerable detail, and tables are given, both in the body of the work and in an appendix, showing the constants for woods of different species under the usual conditions of loading. A useful caution is also given to the reader: "Small specimens in which defects and irregularities have been carefully avoided give results much higher than those obtained from testing full-size pieces of average quality." Strength is also reduced by the moisture remaining in or absorbed by the timber. The practical use of timber in bridges and viaducts is dealt with in Chapter VI, and some examples of timber trestles are given in Chapter XV, where the stresses in braced piers come under discussion. Besides the description of stresses in beams and columns and more elaborate structures, their analysis by graphic methods is also explained, and several clear diagrams are given showing bridges and trusses of different forms and spans suitable for light or heavy loads.

Arched and suspension bridges are described in a chapter to themselves at the end of the first volume, well illustrated with diagrams arranged as folding plates. The explanation of the suspension bridge as the inverted form of the arched bridge is a very happy one, and the comparison of the economy of the arch and the truss for bridge work should give food for thought. There can be little doubt that the arch has often been avoided by engineers owing to the elaborate calculation it involves, and in Appendix III the author adds a table for the reactions of an arch fixed at the ends.

Returning in the second volume to the consideration of arches in reinforced concrete, the author allots 95 pages to the analysis of arch ribs with fixed ends, but gives no large scale drawing to show the position and amount of reinforcement. An appendix of ten pages gives an alternative mathematical treatment of the subject. Retaining walls and high masonry dams also occupy a large amount of space, but, although several small diagrams are given, twenty-six pages of descriptive formulæ have to be turned before a simple plan of a dam is found, and that is only a line diagram (Fig. 122). The substitution of sketches and mathematical formulæ for full explanatory drawings is greatly to be regretted in an otherwise excellent work, and the drawing of the thrust buttress arch dam (Fig. 133) is confused by some return lines just above "C" in plan, which are not explained by the sectional elevation or by section "K K."

The text of the book is generally lucid, but is in parts too compressed to be easily grasped by a young student. It is hardly fair to a reader to expect him to supply mentally the whole idea of proportion necessary for the comprehension of such a sentence as the following (Vol. 1, page 20): "It should be noted that the number of repetitions is smaller the greater the range of stress, not the absolute magnitude of the stress."

*Domestic Sanitary Engineering and Plumbing.* By F. W. RAYNES. London: Longmans, Green & Co. Price 21s. net.

The increased attention now being devoted to questions of hygiene makes up-to-date works on the material issues of this subject of special interest. The book under review is a practical treatise which covers the ground designated in its title in a fairly complete manner, especially as regards plumbing. Opening with a chapter on the physical and chemical properties of the metals and other materials used by the plumber and engineer, which should not be skipped by the student, a useful chapter of 50 pages follows on roof work. Pipe fixing and bending are next considered, and then pipe joints, including the connection of different materials, a subject worthy of more attention than it often receives. A short account of soldering and lead burning precedes a chapter on sanitary fittings, containing some useful criticisms and illustrations of water waste preventers. Soil and waste pipes are given a chapter, followed by an account of house drainage, sewer connections, and testing, in which views on the suitability of various drain tests to different conditions will be found valuable. This section of the book contains some formulæ for discharge from pipes. In 65 pages the author succeeds in giving a useful résumé of sewage disposal and water-supply methods. Chapters XI and XII, on raising water and hydrostatics, might, we think, have been reversed in order. The final two chapters deal with domestic hot-water supply and low-pressure heating systems. These are adequate as far as they go, but it seems rather a pity to stop at low-pressure work, particularly as all its developments have not been included. The author has a published work on heating systems, and our view is that this book might have been confined to the work of the plumber and hydraulic and sanitary engineer. However, this suggestion is not meant to discredit the chapters on heating work. The book is fully illustrated, mostly with diagramatic sketches to a large scale, and can be recommended to students and to those engaged in these trades who wish for a good general knowledge of their duties.

*Management.* By JOHN LEE, M.A., M.Com.Sc. London: Sir Isaac Pitman & Sons, Ltd. Price 5s. net.

An attempt is being made to treat the subject of management as an absolute science, thus ignoring the human element. Throughout his book the author emphasises the fallacy of such a course. The object should be, as he points out, not merely to discover the best way in which work should be done, but the best way in which we can make good workers, which is a more inclusive aim. A *via media* must be struck between the too scientific approach which ignores sentiment, tradition, custom, and would treat labour as a part of the great machine of industry—treating it with consideration, but only with consideration conducive to greater efficiency, as a machine is cared for lest it should function less ably from neglect, and the benevolent model employer who is apt to deprive his staff of all initiative by providing too assiduously for its recreative and spiritual requirements.

The building industry is unique, and requires special organisation and management; it is decentralised, and it does not, except in the most general way, come within the scope of the author's book. Mr. Lee quotes from Mr. Gilbreth, who has made a special study of the bricklayer, showing, by a process of synthesis, how the eighteen motions now commonly employed in laying a brick can be reduced to 1.75. But these eighteen motions are the result of years of tradition and generations of experience, and they cannot be lightly swept aside. Such iconoclasm only serves to arouse the suspicions of the operatives when their sympathy must be enlisted. They must be made to see that this is not merely a device to increase output at their expense, but a means, rather, of decreasing their labour while increasing their earning capacity. The book is full of interest, and the author succeeds in treating his subject without any political bias, thus showing that it is indeed one that transcends any personal espousement of the causes of either labour or capital.

*Paint and Colour Mixing.* By A. S. JENNINGS, London: E. & F. N. Spon, Ltd. Price 12s. 6d. net.

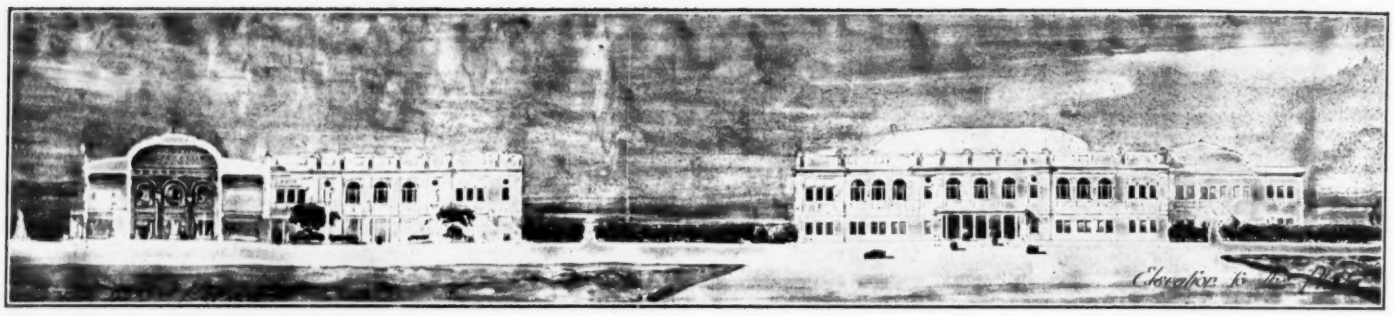
To the average layman painting has no mysteries, and to him we would recommend this book. Not to him alone would we recommend it, let it be added, for the book is primarily addressed to painters and decorators; but it is well for the layman to realise that in what—to him—may appear a simple operation is often entailed for its proper fulfilment a large amount of skill coupled with no little degree of scientific knowledge.

In recent years a considerable amount of investigation has been carried out in connection with decorative painting, and it has been shown that the fineness of the particles of the pigment is largely responsible for the durability of the paint, being, perhaps, as important as the quality of the vehicle. Another development of recent years is that of water paints, usually known as distempers. These paints, of which there are many on the market, are becoming ever more popular for internal decoration. Distemper may also be used as a substitute for oil paint. This use is perhaps insufficiently recognised, certainly at the present time, when it is necessary to exercise every economy and it becomes essential to reduce the cost of paint work; it is likely that a better result would be obtained by the use of two coats of a water paint followed by a good coat of oil than by using adulterated oil throughout. Furthermore, the author maintains that the use of water paint is a certain cure for blistering.

In the nomenclature of colours there would appear to be chaos, and the author puts forward a plea for standardisation in this matter, giving an account, at the same time, of the attempts which have already been made to bring this about in England, America, and France. The volume contains over 300 makers' samples of oil and water paints and water colours. Without doubt, this revised edition constitutes a volume of value and interest.

*The Lay-out of Small Water Mains.* By H. H. HELLINS, M.Inst.C.E. London: Sir Isaac Pitman & Sons, Ltd. Price 7s. 6d. net.

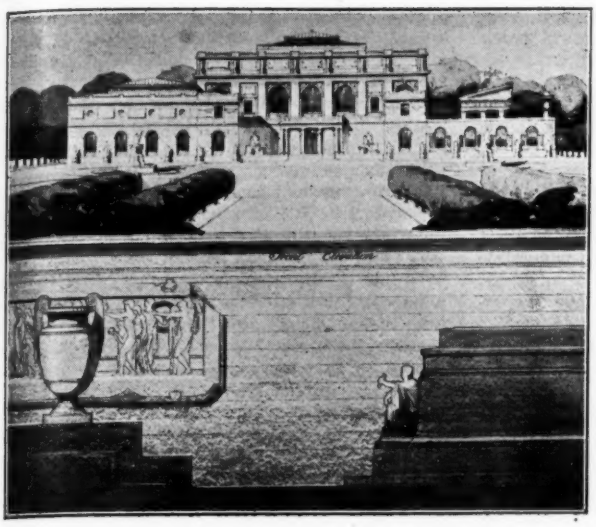
This is a small volume of some 25 pages of text and a like number of tables. There are few works which deal in a small compass with this subject, which is one of great importance to hydraulic engineers. In order to design a system to give a requisite supply to the fittings it serves, certain calculations are necessary. Where some thousands, or even only hundreds, of feet of mains are in question the difference between pipe sizes selected may mean a considerable sum of money, and hence careful calculations are most necessary. The author shows, for example, how to apportion the lengths of 3 in. and 4 in. main for a given head to produce a definite discharge where neither size of pipe is suitable alone. He also deals with that most desirable system for equalizing and producing satisfactory distribution—ring mains. The tables deal with inclinations, velocities, and the numerical value of various factors. We think this book will be welcomed by those interested in this subject.

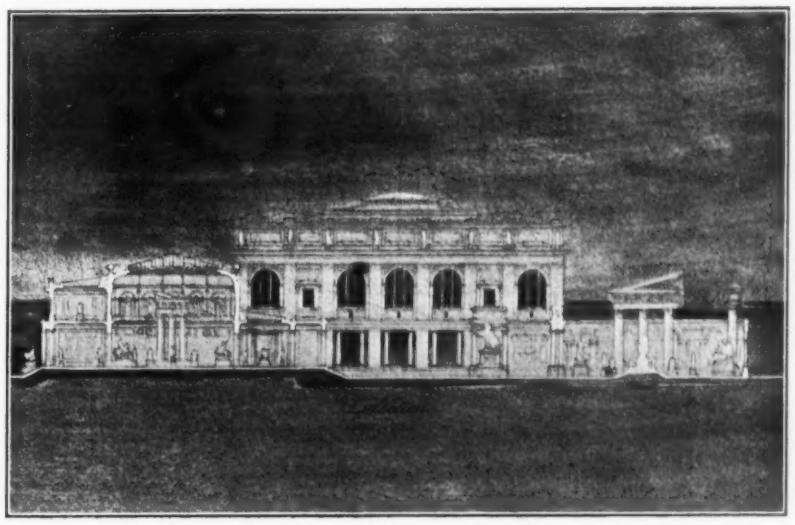


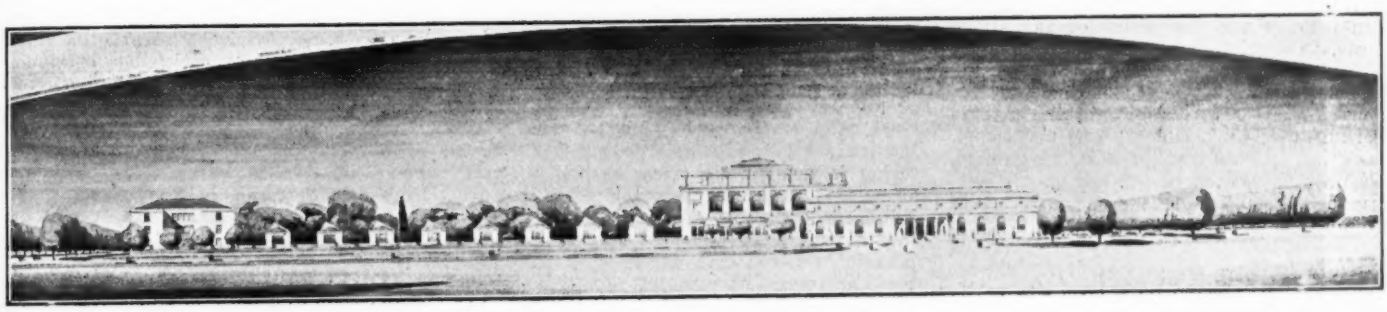


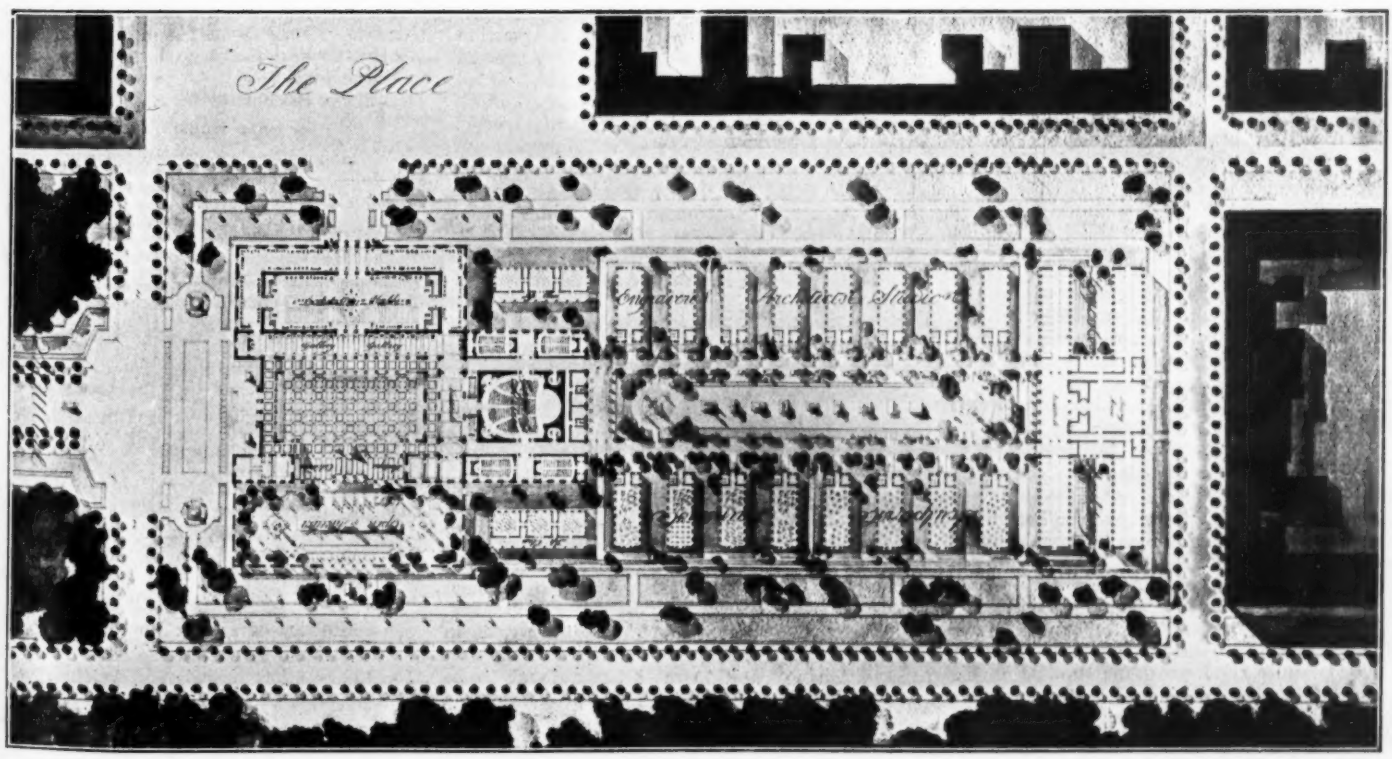

A ROYAL FINE ARTS SCHOOL.

**Victory Scholarship Competition, 1921.** Design by MR. BRIGHT FRASER, M.S.A. (*See p.* 232.)










A ROYAL FINE ARTS SCHOOL.

**Victory Scholarship Competition, 1921.** Design by Mr. J. H. White, A.R.I.B.A. (*See p.* 232.)

## THE VICTORY SCHOLARSHIP.

THE final competition for the Society of Architects' Victory Scholarship, 1921, has resulted in the division of the award between Nos. 49 (Mr. J. H. White, A.R.I.B.A.) and No. 48 (Mr. Bright Fraser, M.S.A.). The designs submitted are now on exhibition at 28, Bedford-square, W.C. In regard to the general architectural appearance it would seem that No. 49 might easily have been placed first, both as regards the elevational treatment and the symmetrical lay-out. The scheme is a costly one, and we fear it is one far beyond realisation in this country. Whether the results to be obtained would be justified seems doubtful, for the training of students in the study and practice of art, whilst it raises somewhat the level of mediocrity, only becomes of the greatest value when it elicits and encourages latent talent of a more than ordinary kind. Something much more important is needed than the provision of halls, museums and studios; still, these students have responded cleverly to the suggestions made, and realised something of the possibilities of architectural effect in such a large group of buildings. The arrangement of architects with engravers and of sculptors with painters might well have been changed for architects with sculptors and painters with engravers.

The subject was "A Royal Fine Arts School," providing a common centre for the study of the four arts—architecture, sculpture, painting, and engraving; and to enable young artists and students to gain a knowledge of the above subjects, to develop their taste and judgment, and to give them an opportunity of acquiring technical efficiency. The school would form a nucleus for all that was best in the artistic development of the country. The art school, which was the subject of this programme, would provide teaching on professional, artistic, and industrial subjects, and would form one of three distinct groups, the *ensemble* of which would constitute a University of Learning situated in an important capital city. The art school would be erected on a level site partly wooded, covering a superficial area of 225,000 sq. ft., situated on a rectangular site, the dimensions of which were left to the competitors. One of the sides would give on to a fine open space, planned with trees and gardens, and the other side would overlook a public place. The group of buildings would be divided as follows:—(1) Entrance and courtyard; (2) general services; (3) museum; (4) ateliers; (5) *loge* building.

### Housing Progress in Scotland.

The following figures show the progress that has been made in State-aided Housing Schemes in Scotland to July 31:—

Permanent houses completed, 2,227; temporary houses completed, 547; reconstruction, houses completed, 67; houses built under the private subsidy schemes, 679; total, 3,520.

There are in addition 12,689 houses under construction, of which 1,703 are being built by private persons with the aid of the Government subsidy. The total amount paid by the Scottish Board of Health, in respect of the 679 houses built under the private subsidy schemes, is £164,970.

### Glasgow Housing Exhibition.

Excellent progress is being made with the Ideal Homes Exhibition promoted by the Glasgow Corporation, which will be held in the Kelvin Hall, Kelvingrove, Glasgow, from September 19 to October 8. The classification of exhibits comprises building materials, furnishings, lighting, heating, labour-saving and cleaning appliances, sanitary appliances, decoration, recreation, foodstuffs (prepared and preserved), and appliances for home nursing. The Committee in charge of the arrangements has decided to have an artisan section on similar lines to those in the previous shows. There will be classes for men and women. Money prizes will be awarded, but no entrance fee will be charged. The classes will embrace models of houses, furnishings, appliances, decorations, needlework and metal work.

## HOUSE PLANNING AND FITTING.

WE have received from Mr. W. R. Gleave, A.R.I.B.A., of Nottingham, the following reply to the article by a retired Admiral which we published in our issue for the 5th inst.—

"The article may be interesting to the lay-mind, and by those ignorant of any responsible architect's capabilities it might be taken seriously. To the profession it will be amusing, as reiterating the parrot cry of the woman architect. My many years' experience in domestic work is my apology for venturing a reply to your correspondent, and without labouring the subject, I will endeavour to answer him from an architect's point of view.

"I have met many women on housing committees and other bodies, who have their own pet ideas on all subjects, and to bring them all to one mind on one small detail is beyond the power of man, and I fear no contradiction when I say a properly trained architect who has had years of experience, with not one housewife's opinion but that of many, listening to and considering each different opinion, and if practicable, incorporating them in the plan, by such repetition of experience, is finally able to argue for and against every suggestion that may be put before him. Personally I have never found the slightest difficulty in proving to the housewife that man does, by constant experience, know much better than she how to provide the most workable and convenient house. If any architect were unfortunate enough to attempt to meet the requirements of half-a-dozen women in one house, the result would be the most perfect conglomeration and mix-up ever conceived.

"I cannot attempt to reply to every detail in 'Retired Admiral's' article, but I have been trying to imagine the house carried out with every idea expressed. Passing over linoleum, bedsteads, curtains and enamelled furniture, we will consider a few vital points in the house planning and construction. I will take it that there are very few people who will be willing to give up every feature of artistic merit and harmony, without which no house can be a home, for the purpose of complying with what one considers to be the most sanitary and utilitarian arrangement. If the slight ledge of a picture rail carries dust, ten times more is carried by each picture back, therefore no pictures must be hung. I imagine with what horror my clients would receive such a suggestion that their living rooms must have a glazed paper. Fancy one's own drawing room treated with the imitation glazed paper one so often sees in the bathroom of a jerry-built house! Most will agree with his remarks on windows, fireplaces, carpets, etc.

"As to sinks, well, I have heard this argument before. A man or woman, 5 ft. 9 in. to 6 ft. high, is a different problem from a maid 4 ft. 9 in. to 5 ft. high. Let such work a sink over the usual height, and hear what is said when the water is running down the arms and dripping on to the floor. Raise your taps above the necessary height, and you incur the splashing all over of the person and floor. Glazed sinks are by far the most sanitary, whilst possibly more liable to breakages. Which will your correspondent have, his sanitary instincts fulfilled, or his china breakages lessened? These questions go right through the whole argument. If one idea is met, another objection is raised, and only by experience is the best and most suitable fitting and arrangement devolved.

"Then again arises the everlasting question of cost. We architects know, by bitter experience, the present-day costs, and our difficulty is in advising our clients what is best for their own requirements, and to meet the amount to be expended. Can you imagine the consternation of a client, wanting a moderately-sized house, when he sees his hall large enough to take a staircase with a 4½ in. rise, which means at least a 14 in. tread? Of course, your correspondent does not realise the waste space such would mean in a two storied house. Such a trivial suggestion can easily account for a 10 per cent. increase in cost of moderately-sized houses. Your correspondent finds two ladies agreeing with every word of his article. Architects generally can find hundreds of their clients' wives thoroughly satisfied with their homes designed by a man architect. No, I am yet to be convinced that any woman is more capable of providing a more convenient or easily worked house than the architect of wide experience, with all the knowledge and hints obtained from a multitude of housewives whom his profession brings him into contact with. Perhaps your correspondent has not heard of the woman architect who put the house up with no room for the staircase, and no means of exit from the scullery except through the hall. There is far more experience required to plan a successful house, both as to arrangements and fitments than the average man or woman realises. The fault does not lie with the architect, but the fact that, in the past, so many houses were erected without architects."

## HOUSING AND TOWN-PLANNING NOTES.

### OBSOLETE BY-LAWS.

WE have received the following note with regard to building by-laws from the Ministry of Health:—

"One of the difficulties which beset builders of to-day proposing to build houses is the existence of by-laws which were framed at a time when the inherent difficulties of building were far less acute, by-laws which do not take into account the progress which has been made in the development of new methods of construction. Complaints have been made that some of the requirements of these by-laws are antiquated and inappropriate to modern conditions. This was foreseen at the time of the passing of the Housing Act of 1919, and provision was made to enable local authorities in the carrying out of housing schemes to depart from their by-laws and to permit the same latitude to other developers. Further, the Ministry of Health was empowered to make regulations over-riding local by-laws, and these were framed on a broad and generous basis, limiting the restrictions to the minimum compatible with due regard to life and health. Moreover, a right of appeal is given to the builders in the event of the local authorities proving unwilling fully to avail themselves of the wider powers. It is significant, however, that there have only been 55 such appeals, which clearly proves that most municipalities are willing enough to grant the much-desired relief to builders in their districts."

### Doncaster Housing Scheme.

The Doncaster Corporation is about to advertise for tenders for the erection of 179 houses, on the Carr House site.

### Sale of Municipal Houses.

The Ministry of Health has fixed the selling price for the Southport Corporation concrete houses at Crossens as follows: Living-room and three bedrooms, £580; living-room and four bedrooms, £610; parlour type, three bedrooms, £650; flatted type, living-room and two bedrooms, £500.

### The Ministry of Health Staff.

Sir Alfred Mond, Minister of Health, has stated in a written reply to Major Barnes that he hopes to reduce the annual cost of the housing staff of the Ministry from £323,647 on June 20 last to about £70,000, this involving a reduction in personnel from 1,043 to 160. The cost on June 20 was made up of £50,187 for permanent staff and £273,460 for temporary staff.

### Ministry of Health Annual Report.

The Annual Report of the Ministry of Health for 1920–21 has been issued by the Stationery Office (price 2s.). It covers the whole range of the activities of the Department, and is contained in a single volume. We learn that capital grants of £275,609 were paid and loans of £378,320 sanctioned during the year towards the provision of sanatoria and other institutions, and over £900,000 was paid as grant in aid of the cost of maintaining institutions.

# THE BUILDING TRADE.

## RED LEAD.

By Arthur Seymour Jennings, F.I.B.D.

It does not appear to be generally recognised that when the bright orange-red colour of red lead is deemed objectionable in a finishing coat of paint, it may be easily toned down by the addition of lamp-black. Three-quarters of a pound of black added to 1 cwt. of red lead yields a reddish brown. Larger quantities may be added up to, say, 6 lbs. to the cwt., and this will result in the production of a deep chocolate colour. It should be noted that it is important that the lamp-black be added in the shape of a paste, *i.e.*, black ground in linseed oil. On no account should dry lamp-black be added to the red, because it could not be made to mix, and the result would be the occurrence of streaks on the painted surface. The addition of black lessens to some extent the durability of the paint film because it renders it less hard, and it should only be used in the finishing coat.

It is the hardness of the coat of red lead which is its chief virtue. When used as a primer in the proportion of about 4 lbs. to the cwt. of white lead, it gives an excellent surface upon which to build up the subsequent coats of paint. As a protective of exposed iron and steel there are few paints to equal it, and it has been successfully employed for many years on large bridges and similar structures. Architects might specify it more frequently for gutters, down-pipes, metal railings, crestings, &c., and call for the addition of lamp-black so as to subdue the colour.

It need hardly be pointed out that the surface of the iron or steel must be perfectly clean and free from rust before the red lead paint is applied. In old work this cleaning is done by means of a blunt chisel, wire brushes of various shapes and sizes according to the nature of the work, assisted by a painters' torch, which not only softens any old paint which may be upon the surface, but helps also in detaching loose particles of iron, scale, and rust. A hammer and chisel combined and worked by electricity is used on large jobs.

In addition to the above, red lead paint may be used with advantage for woodwork which is subjected to hard wear. For instance, stable doors, agricultural buildings, and machinery, as well as for carts, wagons, and barrows, &c. The great hardness of the paint means that it will last two or four times as long as ordinary paint, so that the increased cost, which is not great, is fully justified. Red lead may also be used for water tanks and water pipes, stand pipes, conduits, &c., and, although at first sight one might suspect the danger of lead poisoning, it has been proved that the lead does not go into solution, and that the water is quite free from contamination.

We may now consider the shortcomings of red lead. The first is that being a very heavy pigment (sp. gr. 8.681, as against white lead 6.750, and zinc oxide 5.470) it sinks quickly in the can, and on that account must be frequently stirred. There has, however, lately been produced a red lead which does not settle out, the pigment remaining more or less in suspension. Red lead should not be used under very light paints or white enamel, as it has a tendency to work through to the surface and cause discoloration. One of the modern "undercoats" specially made for the purpose from lithopone answers much better, and is cheaper because of the extraordinary good "body" and the splendid spreading capacity. Red lead must only be mixed as required.

The following are the chief points which should be included in a specification for red lead when used on an extensive scale —

(1) The red lead shall be pure and consist of at least 94 per cent. fine red lead, *i.e.*, oxide of lead. No added pigment will be permitted.

(2) When mixed with raw linseed oil, turpentine and liquid driers in the proportions given below, the resultant paint when brushed on a smooth vertical iron surface shall dry hard and elastic without running or streaking:—

| | | |
|---|---|---|
| Dry red lead | .. .. | 23 lbs. |
| Raw linseed oil | .. .. | 5 pints |
| Turpentine | .. .. .. | 2 gills |
| Liquid drier | .. .. | 2 ,, |

(3) The fineness shall be determined by mixing dry red lead with water and passing it through 21 silk bolting cloth.

(4) The specific gravity shall be 8.680 to 8.683. A sample placed in a graduated glass cylinder containing water, after being well stirred and allowed to stand for 24 hours in a temperature not below 70 deg. F., shall not show more than 1½ per cent. by volume of sediment.

## THE FACTORY LATRINE.

The keynote of any industrial revival must be efficiency. Manufacturing science has by no means come to a dead wall, but to obtain the full efficiency without which the industrial revival can never come it is necessary to pick up the unconsidered trifles of waste, and, apart entirely from humanitarianism, to consider in minute detail the health and bodily requirements of the workers.

Capital expenditure is always reluctantly undertaken, especially in times of depression, and capital expenditure that is difficult to figure out in £ s. d. is still more taboo. But it is a fact proved again and again under the stress of war production that welfare work, such, at least, as dealt with the physical condition of the worker, brought a tremendous return on the capital involved. Ventilation, heating, sanitary conveniences, which in pre-war days were largely considered as a dead burden on industry which had to be borne but should be met with as little expenditure as possible, even at a loss of efficiency, were developed and given consideration, often with the help of E.P.D., which had not been possible before, and the gain in the reduction of lost time and the greater vitality of the workers was astonishing to all concerned and has carried conviction to many who were sceptical that capital expenditure on the not directly profit-producing portions of a factory is in many ways an extremely profitable investment.

The situation of the latrine blocks for both sexes requires much more consideration than it has had in the past. The odd waste corner of the site, not at a first glance suitable for any other purpose, has too often been used, with the result that the block is too far removed for efficiency, and often ill-planned and ill-ventilated. It is true that the men's latrines can often with advantage be detached from the main block, but they should always be so placed that walking time is reduced to a minimum and that the whole block is subject to observation, and, if possible, so placed as to be brought constantly under the eye of the principals. Feelings of prudity that have determined the placing of this block of the works in the past are entirely wrong, and have led to the latrines being placed in some out-of-the-way corner where they are never observed, and consequently tended to drift into a state of uncleanliness which subtly devitalised the workers. It should be realised that there is nothing disgraceful, or to be hidden or camouflaged, in this block, and that the more light thrown on its daily use the better. American practice has fully realised this, and universally one finds either that no doors are provided to the compartments, or, if a door occurs, it can only be closed by the occupant, remaining open when the closet is not in use. This has resulted in the compartments being kept in a state of cleanliness that is only too rare in British industrial institutions. The type of door often found in America consists of two leaves each composed of 11 in. by 1½ in. cramped boards hung on spring hinges to open inwards, and provided on the inside with a heavy wrought-iron turnover catch, wood blocks being provided on the partitions to take the blow of the doors when they spring open. Each leaf is provided with a chain which regulates the closing position and allows the catch to work easily; this also considerably increases the spaciousness of the closet. Partitions and doors are invariably kept clear of the floor, usually with a steel channel in front on which the doors are hung with channel iron capping and tee bottom rail, the infilling being of glazed slabs, although sometimes metal lathing rendered in cement on both sides is employed.

The latrine block should be planned as a whole, and the idea (a tradition from the past and from other conditions) that each separate closet must have a separate window should be abandoned. The ideal block would consist of a side-lighted common passage with a partly-glazed, partly-louvred lantern running the full length of the block and without any windows or separate ventilation to each compartment; considerable economy in construction is thus effected, and the result from every point of view is more sanitary and health producing.

The aim of all latrine design is to render the cleaning of the block as easy as possible. The most dirt-collecting portion of the whole, and that most difficult to clean and most likely to be scamped, is the trap of the pan itself. It is, therefore, better to encase at least the rear portion of the pan with fine concrete cement rendered, and it may even be advisable to encase the whole pan, shaped slightly in the front to allow comfortably for the heels, and brought up to the ring of the pan at the back and sides, with the junction against floors and walls rounded to a radius of about 1½ in., thus enclosing the whole of the dirt-collecting portions. The pad seat is the most suitable for men, and if this concrete casing is provided the evils only too common with this arrangement can be overcome by fixing the pads or blocks on the concrete instead of on the rim of the pan.

The flush pipe in industrial work should never be of lead, and is preferably of galvanised water tubing kept at least 1 in. clear of the wall in every part. Chains should be heavy with galvanised rings, and it is best to fix a strong collar just above the handle in its normal position to prevent the chain swinging and cracking the adjacent tiles or cement. In practice it is found that even the strongest rod has a tendency to get bent, and, although theoretically cleaner, it is not an improvement on the chain. W.W.P.'s need to be as strong as possible and should each be fitted with a stop-cock to facilitate repairs without putting the whole range out of use. The avoidance of windows in the closets adds to their cleanliness, prevents the creation of draughts, and enables the W.W.P.'s to have the short vertical flush that is so desirable.

It is not usual at present to heat the latrine block, but this is undoubtedly a mistake, and, although nothing is worse than an overheated block, sufficient heat, which can often be introduced very conveniently by waste steam, to prevent chill and down-draught, is very desirable; a small coil under the lantern will usually satisfactorily fulfil this desire.

Separate urinal stalls are not usually required or desirable in a factory. One of the most satisfactory methods is to asphalte the wall and channel, thus offering an impervious surface, itself antiseptic and kept fresh and free from cracks by the constant action of the sparge pipe, the W.W.P. being automatic wherever possible.

The above notes in general apply also to women's latrines, but these should nearly always be connected to the building by a cross-ventilated lobby and be planned in connection with a small welfare room from which supervision of the whole can be maintained. The pad seat is not suitable for women, and usually a skirting should be provided with a hinged seat.

# THE INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY.

### Annual Meeting.

ON Thursday and Friday, last week, the annual meeting of the Industrial Council for the Building Industry was held at Montagu House, Whitehall, London, under the presidency of MR. J. STORRS (Stalybridge).

THE CHAIRMAN, in opening the first day's proceedings, said he was sorry the representatives of the master plumbers would not be present that day because they had fixed meetings of their own for the same date. Nor would there be present any representative of employers from Scotland, who recently decided to resign from the Council, but afterwards said they were willing to receive a deputation from the Council with a view to retaining their membership. Several attempts had been made to have that meeting, but up to the present they had not been able to arrange it.

MR. J. BATCHELOR (Treasurer) presented the accounts, showing that the balance at the bank at the end of the financial year was £958 11s. 5d.

The accounts were adopted.

## EDUCATION COMMITTEE.

### The Scheme for Apprentices.

The meeting then proceeded to deal with the report of the Education Committee, of which Mr. S. Smethurst is Chairman. This stated that up to July 31 last local conferences in connection with the apprenticeship scheme had been held in thirty-four centres. In the majority of districts the scheme had been well received and the necessary steps taken to establish the local Building Trades' Apprenticeship Committees.

The report further stated that a communication had been received from the National Apprenticeship Council for the Plumbing Trade regarding the possibility of co-operation between the Council and the Committee, and the Committee submitted a series of recommendations to effect this, for which they asked the approval of the Council.

MR. J. H. CANTRELL, in proposing the adoption of the report, said he claimed that the apprenticeship scheme was the best they had at the moment, and in the interests of all it should receive a better measure of support. It was not possible for the Committee to work the scheme unaided, and it was necessary that the Council should see that something was done on the lines proposed, because it offered greater facilities for the education of apprentices in the plumbing trade than were offered to various other crafts.

MR. OTLEY (Operative) seconded, and said so far as he could see the usual method was for a plasterer to take his son into a shop to learn his trade without any idea of an agreement at all. The operatives were at the mercy of the employers. If the employers did not bind themselves to take apprentices the operatives had no option in the matter; the only thing left to them was to get the boys into other places. It would be a good thing if something could be done to assist the operatives in the matter of apprenticeship.

MR GIBSON (Operative) appealed to the Council to support the scheme. He said at a meeting at York there was a distinct amount of apathy shown, and many who should have attended did not do so. If the Council was to do anything useful for the industry they should set their minds on some form of apprenticeship. It would be discreditable to both sides if they did not do so.

MR. D. ANDERSON (Employer) moved, as an amendment, that the Section of the report relating to the co-operation of the plumbers be referred back for reconsideration. He said the recommendations were not the views of the whole Committee, but of a sub-committee. When they were brought before the main Committee the attendance was very small, and it would not be right to allow recommendations by such a small number to be passed without a protest. They looked for the unification of the whole of the industry, but those recommendations pointed to disruption. It was not only the plumbers who required technical training. Others required it just as much, but it would not do for the plumbers to get outside the industry altogether. They wanted to treat the industry as one, and he could not see why the plumbers could not come in and be part and parcel of the Committee; if they liked to have a sub-committee of their own there should be no objection to it.

MR. E. J. BROWN (Employer) seconded the amendment.

MR. MACDONALD (Operative) said he thought Mr. Anderson's suggestions would not improve matters. He was against the amendment, and suggested the adoption of the report.

MR. T. FOSTER (Employer) said it seemed to him that the plumbers, having worked a successful scheme for a long time, simply wanted to co-ordinate their work with the other trades, and the suggestion was that they should work in harmony together. He suggested that it was hardly desirable that they should take the extreme step of referring the matter back. The building trade had not trained boys as he thought it ought to have done. There had been difficulties in the past where boys had been able to obtain a higher rate of pay in other kinds of work, but the boys had been coming forward much more freely of late and there had been no difficulty in getting the number required in the plastering trade. If they could push the idea of apprenticeship and encourage boys to come forward he thought it would not be very long before the building industry would be satisfied. The boys they had got in the past twelve months were of a better class than those who had come along during the past twenty years, and he looked forward to the apprenticeship scheme with a very considerable amount of hope. He agreed that every encouragement should be given to the boys when they came forward.

MR. E. J. BROWN (Employer) said the building trade in London was very keen on this subject. He maintained that there should not be separate apprenticeship schemes for different branches of the industry; there were already five schemes before them. He wanted to see a scheme that would cover the whole of the branches of the trade.

MR. T. BARRON (Operative) said much of the scheme had come from the operatives' side, although there was a great deal of passive resistance.

MR. BICKFORD (Operative) said the plumber needed more education than other tradesmen, because there were so many different sections. He saw no objection to plumbers having a separate apprenticeship scheme.

MR. W. H. NICHOLLS (Employer) said the employers were seeking to make the trade one body. He strongly deprecated the inclusion of the section in the report, but he agreed to all classes of workmen having education. He wanted the building trade to be united, and if any section broke away it would be bad for them all. He did not think the National Federation of Building Trades' Employers would approve of the scheme proposed, and it was useless to pass the scheme without the approval of the constituent bodies of the Council.

MR. HARMER (Operatives) said he would vote for the exclusion of the Section, because he thought it was asking too much of the plumbers.

MR. HICKS (Operatives) said there did not seem to be the enthusiasm over this scheme that he thought would have existed. He was of opinion that the employers were not taking this scheme up wholeheartedly. He believed the operatives had agreed with all the recommendations in order that lads might be taught particular branches of the industry, and they believed that instead of having a fragmentary system it would be much better to have a general national scheme of teaching. There were many boys ready for apprenticeship and many applications had been made asking employers to accept them, but the contracts were so short and the possibilities of work for the next two or three years were so uncertain that they did not care to enter into the matter because they did not know whether they would be able to carry out their part of the bargain. Instead of relying on individual employers for apprenticeship, a general scheme should be agreed upon, taking into consideration the size of the industry and the number of lads capable of being employed. In the event of any employer not being able to carry out his contract the Council should then take upon itself the duty of transferring the lad to someone else.

MR. E. J. STRANGE (Employer) said trouble was caused in these matters just as much on the side of the operatives as on the side of the employers. Meetings were called and sometimes the operatives declined to attend; or both sides wrangled with regard to wages. But because there were difficulties of that character, he did not think the scheme should be condemned or severely criticised.

MR. D. ANDERSON (Employer) said this was not a scheme, but something they were going to tack on to a scheme. In South Wales the scheme had been explained, and there was a greater number of apprentices coming in than he thought there was throughout the country. Technical education of the boys in the building industry had been too long neglected, but the trouble was the differentiation offered to different classes. He hoped the matter would be referred back.

The amendment was carried by 22 votes to 21.

MR. W. MOFFATT said the greatest criticism that he had heard on the scheme had been on the question of wages, and that had wrecked several promising opportunities for carrying it out. Many apprenticeship schemes had been worked from the employers' side for years, and any information about them could be obtained before the next meeting. In reply to MR. DAVIDSON (Employer), MR. CANTRILL said there had only been suggestions upon which a scale of wages could be formulated.

MR. SHANKS (Operative) said they found a great reluctance on the part of some employers to take apprentices, and he hoped nothing would be done to retard this scheme, which was wanted.

The amendment was put as a substantive proposition, and carried.

MR. A. J. FORSDIKE (Employer) moved a resolution to the effect that the employers and operatives meet together for the purpose of issuing joint instructions to their constituents with regard to their attitude to the scheme.

The proposition was carried, and the remainder of the report was ageed to.

## MANAGEMENT AND COSTS COMMITTEE.

### The Unemployment Insurance Scheme.

The Management and Costs Committee submitted a report which dealt with a suggested scheme for unemployment, payment for lost time owing to stress of weather, and regularisation of demand of employment in the industry.

Mr. T. FOSTER (Chairmain of Committee) moved that the report be approved and remitted to the various constituent bodies in order that they might express their opinions on the principles outlined, and that the Committee be authorised to proceed with the preparation of a detailed working scheme of supplementary unemployment insurance having regard to any recommendations that might be received from the constituent bodies. He said the Committee had assumed that there was a considerable measure of agreement on both sides that something was necessary in the building industry in the way of a better scheme of unemployment insurance than was given by the Government scheme. They suggested that their scheme should apply to all men registered with the Employment Exchanges as operatives in the building industry. Some difficulty at first presented itself in regard to management, and the Committee came to the decision that the scheme should be managed by a joint body equally representative of employers' and operatives' organisations, appointed by the Industrial Council. The actual

administration of the scheme would be in the hands of the Ministry of Labour. Referring to the question of payment for lost time owing to stress of weather, he said the Committee was unable to make any recommendation on the subject owing to the lack of data. They had asked the National Federation of Building Trades' Employers to collect information from its members as to actual time lost over the twelve months from those causes. It did not appear to be possible for the Federation to make such an inquiry at the moment, but it had consented to cause inquiries to be made as to whether individual employers would be willing to keep and furnish periodical records on the matter. With regard to regulating the flow of labour in the industry, the Committee believed that if that could be done effectively it would result in decreasing unemployment. At a future meeting the Committee hoped to present a report on the question of accountancy and costs.

MR. W. CROSS (Operative), in seconding the resolution, said he considered the report was one of the most important the Council had yet been asked to consider. In the scheme both sides were safeguarded in so far that it was to be worked by the Government.

MR. E. J. STRANGE (Employer) supported the scheme, which he said was a definite effort to remove the consequences resulting from unemployment. He was afraid the Committee would have an almost impossible task when it tried to deal with the regularisation of the demand for labour in the industry. The present unemployment benefit under the State scheme was inadequate, and under this scheme the benefit was doubled. If the scheme were adopted those coming under it would receive 15s. per week from the State and 15s. per week from the supplementary benefit, while in both cases the contributions would be the same, namely, 8d. per week from the employer and 7d. from the operative. He was not afraid that the scheme would produce malingering—he believed the operatives would see to that.

MR. STRANKS (Operative) said while he did not oppose the scheme the question of unemployment was one that should be dealt with nationally, and not by particular trades.

MR. J. E. DROWER (Surveyors' Institution), referring to the question of accountancy, said a proper system of accountancy and costing would be a great advantage to both sides of the industry. It would tend to diminish the cut-throat competition which was engaged in by the smaller contractors to the prejudice of operatives. He was, however, opposed to making the practice obligatory by law, as had been suggested in some quarters, because accountancy and costing was still in its infancy, and it would be a great mistake to put the dead hand of officialism on a progressive science. He thought the National Federation might take up the question and press upon its members—especially the smaller employers—the importance of adopting a proper system.

MR. F. G. WHITTALL (Employer) supported the scheme, which, he said, he believed would tend to reduce the present high cost of building.

After further discussion the resolution was carried with two dissentients, and the report was adopted.

## ELECTION OF OFFICERS.

MR. J. STORRS (Employer) and MR. T. BARRON (Operative) were respectively re-elected Chairman and Vice-Chairman of the Council for the ensuing twelve months, and MR. J. BATCHELOR was re-appointed Treasurer.

Some discussion took place regarding the election of various Committees, and ultimately it was agreed that these bodies should remain as at present constituted for the ensuing three months, by which time it was hoped that Mr. Anderson and Mr. Macfarlane would have seen the Scottish employers in reference to rejoining the Council.

## SAFETY AND WELFARE COMMITTEE.

### Woodworking Machinery Regulations.

MR. T. BARRON (Operative) proposed the adoption of a report of the Safety and Welfare Committee, containing suggested alterations in the draft regulations which the Home Secretary issued in September last year for regulating the use of woodworking machinery.

MR. KENNEDY (Operative) seconded.

MR. A. J. FORSDIKE (Employer) moved as an amendment that the report be received and the consideration thereof adjourned pending an opportunity being given to those constituent bodies who had lodged objections against the original draft to consider the amended draft, and report to the Council at a later date. He said the altered draft did not seem to meet the requirements of some of those most interested in the matter. It would not be fair to ask them to adopt the alterations without their having been considered by the constituent bodies.

MR. E. J. BROWN (Employer) seconded the amendment.

MR. W. WILLIAMS, of the Home Office, said that failing agreement by the Council on the matter the Home Secretary might either decide to put the regulations in force or to submit the whole matter to a public inquiry—a step which he (Mr. Williams) believed most of the trades concerned were unwilling to face because it would mean considerable expense and perhaps cause a good deal of irritation.

MR. D. ANDERSON (Employer), in supporting the amendment, said, in the main, the employers agreed with what had been attempted to be done, and it might be that the suggested amendments to the original draft regulations would meet with their approval. They must, however, have time to consider them.

MR. ROLAND CHESSUM and MR. J. DAVIDSON having spoken in support of the amendment, MR. BARRON withdrew his resolution, and the amendment was agreed to by 22 votes to 10.

### Safety Regulations for Building Operations.

The Safety and Welfare Committee also reported on the administration of the proposed safety regulations for building operations which the Council had agreed upon at its meeting in Glasgow in May last year, and which had been sent to the Home Secretary, who had stated that he was prepared to take steps to bring the regulations into operation in the case of buildings being constructed with the aid of power machinery. The Committee stated that, at the request of the Home Secretary, they met the Chief Inspector of Factories (Mr. R. E. Graves) at the Home Office last March, and discussed with him the steps which could be taken by the industry to assist in the administration of any regulations that might be made. After carefully reviewing the matter, they had come to the conclusion that the industry should take steps to assist in carrying out any regulations. They suggested that district committees consisting of representative employers and workers in the industry should supervise the observance of the regulations, and that the workers and other parties should be encouraged to lay before these committees complaints respecting avoidable dangers on any building operations in the district. In districts where there was already a joint committee of the building industry, they suggested that that Committee should undertake the work, either directly or by means of a sub-committee. In areas for which there was at present no such body, a special committee could be formed for the purpose. For large building operations which were likely to last some time, works committees could be set up to deal with safety and other matters at each particular works, and in the event of disagreement between the employer and the works committee, appeal could be made to the district committee.

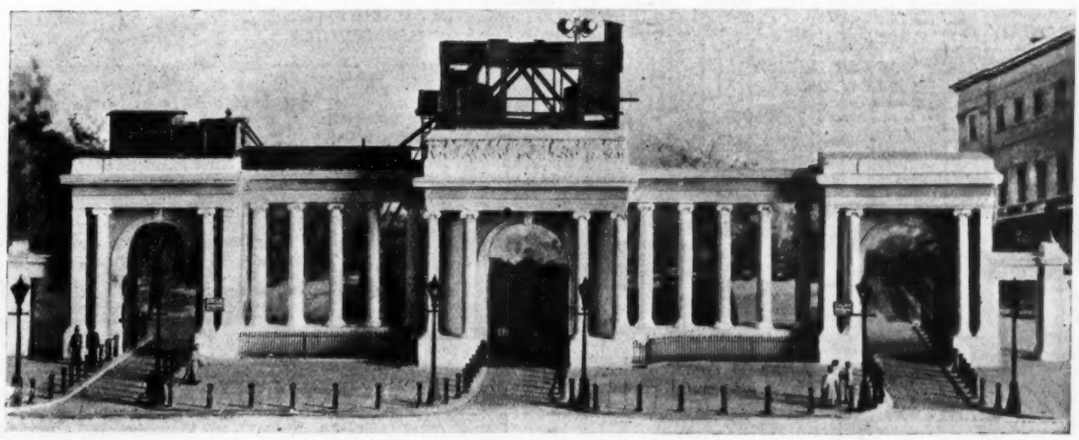
On the motion of MR. BARRON (Operative) seconded by MR. MCPHERSON (Operative) the report was adopted.

## THE NEXT MEETING.

It was agreed that the next meeting of the Council should be held in London on November 10 and 11.

### Wages in the Brickmaking Industry.

A settlement has been reached in the dispute of brickworkers at Buckley. At a conference between representatives of the employers and workmen it was agreed that there should be a reduction of 4s. 6d. per week on restarting work; a further reduction of 4s. 6d. per week on September 1, and a further reduction of 3s. November 9. The reductions are to stand until January 4, 1922.



**Hyde Park Gate During the War.**

[From a model at the Imperial War Museum, Crystal Palace, showing the searchlight apparatus on the gate.]

## NEW INVENTION.

### Concrete Construction.

THE "Orem" system of concrete construction, illustrated on this page, is a new form and method of construction in connection with which the Provisional Patent numbers for the outer and inner blocks respectively are 15,429 21 and 15,953/21. The outer block is composed of two slabs 2 ft. long, 1 ft. high, and 2 in. thick, made of coke breeze concrete and tied together with two galvanised iron ties. These blocks are made so as to form a breaking joint and filled in with 6 to 1 ballast concrete 5 in. thick, so that when erected a wall 9 in. thick is formed, which may be plastered on internal face and rough-casted on external face.

The partition blocks are made of coke breeze concrete 4½ in. thick for ground-floor partitions, and 3 in. thick for upper floor partitions, with hollows formed in the blocks and filled in with 6 to 1 poured ballast concrete so that when erected each block is tied in with the other both vertically and horizontally. Alternate courses are bonded into the external wall.

This method of construction, we are informed, compares favourably with other forms of concrete construction as regards cost and works out cheaper than brickwork at present-day prices. A considerable saving in time and labour is claimed as by obtaining one true face the other must correspond, owing to the fact that both are tied by the galvanised iron ties. The walls in this system can be erected by unskilled labour, and no shuttering is required.

The patentees are Messrs. O. C. Richardson and E. Meredith, of Edward's-avenue, Northolt Junction, Middlesex.

## NEW COMPANIES.

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

PARKINSON & SPENCER, LTD. (175,597). Registered July 7. Ambler Thorn, Fireclay Works, Halifax. Fire-clay, brick and block manufacturers. Nominal capital, £15,000.

WISE & LANSDELL (SALISBURY), LTD. (175,755). Registered July 15. 51, Silver-street, Salisbury. Builders. Nominal capital, £3,000.

BARGMANS, LTD. (175,736). Registered July 15. 21, Bride-lane, E.C. Builders and contractors. Nominal capital, £1,000.

FLOROC JOINTLESS FLOORING CO., LTD. (175,741). Registered July 15. 133, Moss-lane East, Manchester. Nominal capital, £1,000.

ROBERTS & MAGINNIS, LTD. (175,771). Registered July 16. Round House, Wellington-road, Leeds. Brick, tile, ganister and pipe makers. Nominal capital, £20,000.

STANFORD-LE-HOPE SAND CO., LTD. (175,712). Registered July 13. Abbots Hall, Stanford-le-Hope. Nominal capital, £5,000.

GENERAL COMMERCE CO., LTD. (175,860). Registered July 21. 2, Orchard Gardens, High-road, Goodmayes, Essex. Manufacturers and dealers in building materials. Nominal capital, £4,000.

STANLEY REEVES, LTD. (175,842). Registered July 20. The Works, Warwick-road, Whitstable. Builders and engineers. Nominal capital, £5,000.

H. W. BUDD & SON, LTD. (175,802). Registered July 19. 102, St. John's Park, Blackheath, S.E. Builders' merchants. Nominal capital, £5,000.

J. & W. LEACH & SONS (PRESTWICH), LTD. (175,827). Registered July 20. Builders and contractors. Nominal capital, £3,000.

MIDDLETON BROTHERS, LTD. (175,837). Registered July 20. 184, St. George-street, Stepney, E.1. Oil, colour, lead and glass merchants. Nominal capital, £20,500.

BRITISH EMPIRE LAPISTONE SYNDICATE, LTD. (175,849). Registered July 21. 440, Fulham-road, S.W.6. Manufacturers of stone and cement. Nominal capital, £15,000.

SMITH & THOMPSON, LTD. (175,868). Registered July 21. Joiners, builders and contractors. Nominal capital, £7,500.

DE FREYNE, LTD. (175,880). Registered July 22. 2, 3, and 4, Oat-lane, E.C. Dealers in marble. Nominal capital, £1,000.

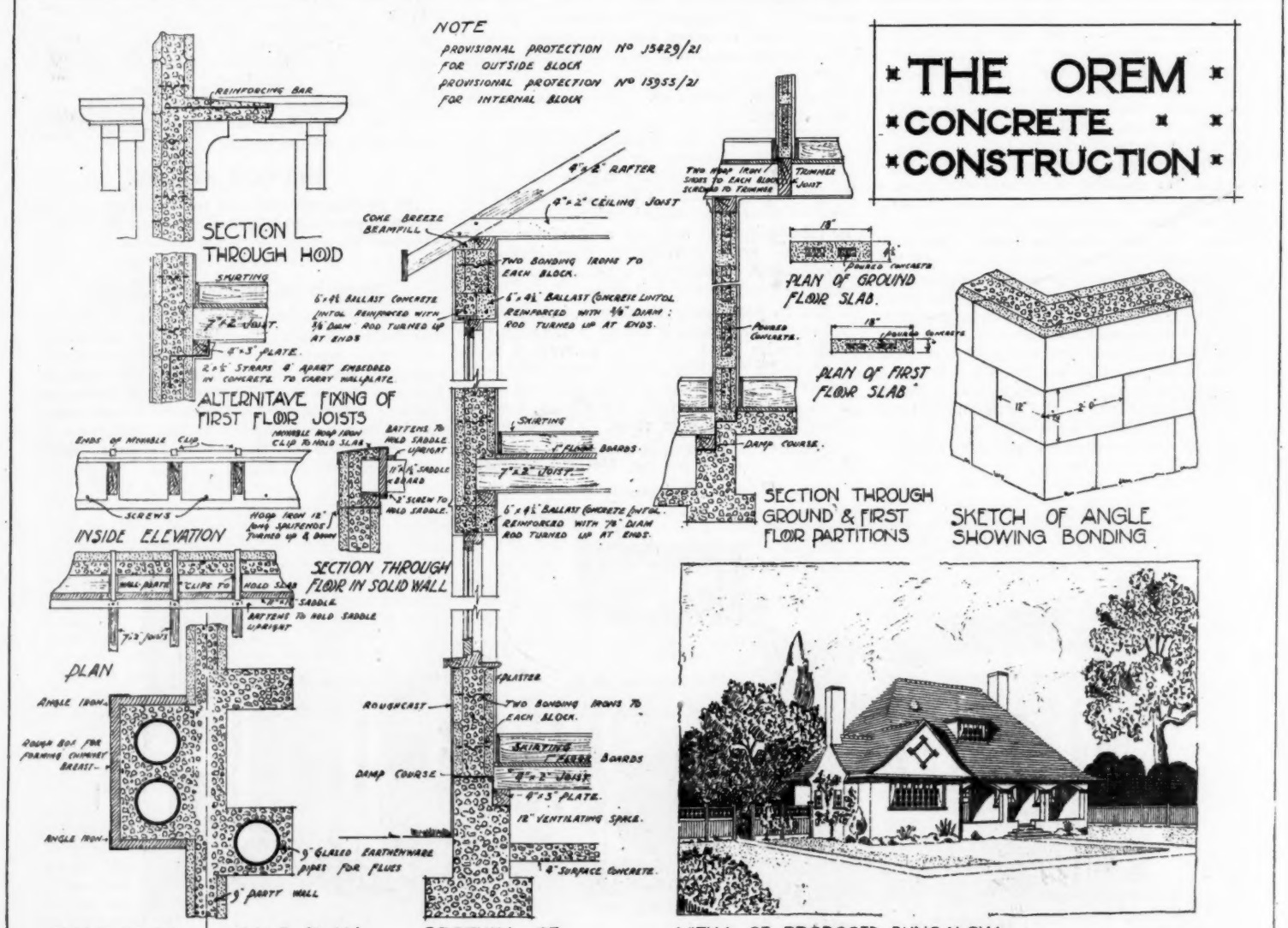
FRANK TURNER, LTD. (175,901). Registered July 23. Exhibition stand fitters and sign makers. Nominal capital, £10,000.

ANTHONY FASEY & SON, LTD. (176,050). Registered July 30. 16, Regent-street, S.W.1. Engineers, contractors and builders. Nominal capital, £50,000.

THOMAS CORNALL, LTD. (176,098). Registered August 3. Plumbers, glaziers and builders' ironmongers. Nominal capital, £10,000.

HARLEYS (CROSBY), LTD. (176,130). Registered August 5. 22, Lord-street, Liverpool. Manufacturers and dealers in metal windows. Nominal capital, £8,400.

CORNER & BROWN, LTD. (176,105). Registered August 4. Timber merchants and sawmill proprietors. Nominal capital, £3,500.


NOTE
PROVISIONAL PROTECTION Nº 15429/21 FOR OUTSIDE BLOCK
PROVISIONAL PROTECTION Nº 15953/21 FOR INTERNAL BLOCK
THE OREM CONCRETE CONSTRUCTION
REINFORCING BAR
SECTION THROUGH HOD
SKIRTING
7"×2" JOIST.
4"×3" PLATE.
2½" STRAPS 8' APART EMBEDDED IN CONCRETE TO CARRY WALLPLATE.
ALTERNATIVE FIXING OF FIRST FLOOR JOISTS
ENDS OF MOVABLE CLIP
SCREWS
INSIDE ELEVATION
PLAN
ANGLE IRON
ROUGH BOX FOR FORMING CHIMNEY BREAST
9" GLAZED EARTHENWARE PIPES FOR FLUES
9" PARTY WALL
HALF PLAN THROUGH FLUES
HALF PLAN OF FIRE-PLACE
4"×2" RAFTER
4"×2" CEILING JOIST
COKE BREEZE BRAMFILL
6"×4½" BALLAST CONCRETE LINTOL REINFORCED WITH ⅝" DIAM ROD TURNED UP AT ENDS
TWO BONDING IRONS TO EACH BLOCK.
BATTENS TO HOLD SADDLE UPRIGHT
3" SCREW TO HOLD SADDLE.
HOOP IRON 12" LONG SUSPENDS TURNED UP & DOWN
SECTION THROUGH FLOOR IN SOLID WALL
PLASTER
ROUGHCAST
SKIRTING
1" FLOOR BOARDS
7"×2" JOIST
DAMP COURSE
4"×3" PLATE.
12" VENTILATING SPACE.
4" SURFACE CONCRETE.
SECTION OF OUTER WALL
TWO HOOP IRON SHOES TO EACH BLOCK SCREWED TO TRIMMER
TRIMMER JOIST
POURED CONCRETE
PLAN OF GROUND FLOOR SLAB.
PLAN OF FIRST FLOOR SLAB
SECTION THROUGH GROUND & FIRST FLOOR PARTITIONS
SKETCH OF ANGLE SHOWING BONDING
VIEW OF PROPOSED BUNGALOW TO BE BUILT WITH OREM BLOCKS

## NOTICES TO QUIT AND DEMANDS FOR INCREASE.

WE may draw our readers' attention to a case, Hill *v.* Hasler (*Weekly Notes*, August 6) decided by two Lords Justices sitting as a Divisional Court. The plaintiff had let to the defendant a house in Paddington at a monthly rent of £3 3s. 4d. On October 24, 1920, the plaintiff had served on the defendant a notice to quit which would determine the tenancy on November 24, and at the same time a notice, dated October 23, that an increase in rent would be demanded from November 24, after the notice to quit expired. The increase demanded was partly in respect of increased rates payable by the plaintiff, partly in respect of repairs for which the plaintiff was responsible, and partly an increase of 5 per cent. on the net rent. It does not appear whether the increase demanded were correct under the Act, for the point upon which the case turned was whether the notice of increase in itself was good. The County Court judge had decided that the notice was bad, holding that the notice of increase, even if of the same date as the notice to quit, was only a provisional notice until the expiration of the term; that it would not become valid until the expiration of the term; and that the times required by the Act for a notice of increase would commence to run only from the expiration of the term, viz., November 24. Section 3, subsection (1) of the Act prescribes, "Nothing in this Act shall be taken to authorise any increase of rent except in respect of a period during which but for this Act the landlord would be entitled to obtain possession."

Subsection (3) is: "Notwithstanding any agreement to the contrary where the rent of any dwelling house to which this Act applies is increased no such increase shall be due or recoverable until, or in respect of any period prior to the expiry of four clear weeks, or where such increase is on account of an increase in rates, one clear week after the landlord has served upon the tenant a valid notice in writing of his intention to increase the rent. . . ."

The Court held that the county court judge was wrong in holding that a valid notice of increase could not be given until after the expiration of the tenancy, for there was no provision in the Act which supported that view. Section 3, subsection (2) said nothing as to the time when the notice of increase should be served; it only provided that the increase should not be authorised except in respect of a period during which, but for the Act, the landlord would be entitled to obtain possession, *i.e.*, after a valid notice to quit has expired. Neither did subsection (3) say that a notice of increase was not valid because it was given during the tenancy; it only provided that the increase was not due or recoverable until the expiry of certain periods after the service of notice. Therefore, where a notice of increase of the proper length had been given concurrently with a valid notice to quit of the same length, there seemed no reason why it should not take effect as soon as the notice to quit expired. These conditions existed in this case, and the notice of increase was valid.

We have recently been asked whether a landlord is entitled to an increase in rent before he has given notice to quit. This case makes it abundantly plain that no increase of rent can be demanded or become payable during the currency of the tenancy, but that notice of an increase can be given with a notice to quit, and that the time prescribed by the Act for a notice of increase will run before the actual determination of the tenancy.

### Holland Park Site.

The question of Holland Park as a site for the University of London was further considered on Wednesday last week, by the Committee of London M.P.'s. The consensus of opinion was that the site should be preserved, if not for the University, for some Government purpose, and action is to be taken with that object.

## RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the building trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

| | Masons. | Bricklayers. | Carpenters, Joiners. | Plasterers. | Slaters. | Plumbers. | Painters. | Masons' Bricklayers' Plasterers' Labourers. |
|---|---|---|---|---|---|---|---|---|
| Aberdare | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Accrington | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Altrincham | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Ashton-under-Lyne | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Barnsley | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Barrow-in-Furness | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Barry | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Bath | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/6 |
| Bedford | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Birkenhead | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/9½ |
| Birmingham | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Bishop Auckland | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Blackburn | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Blackpool | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Bolton | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Bournemouth | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Bradford | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Bridgwater | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/7½ | 1/3½ |
| Brighton | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Bristol | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Burnley | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Burton-on-Trent | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Bury | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Cambridge | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Cardiff | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Chatham | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Chelmsford | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Cheltenham | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/6 |
| Chester | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Chesterfield | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Colchester | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/- |
| Coventry | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Crewe | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Darlington | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Derby | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Doncaster | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Dudley | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Durham | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| East Glam. and Mon. Valleys | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Exeter | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/8 | 1/5 |
| Folkestone | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Gloucester | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/9 | 1/6 |
| Grantham | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Grays | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1½ | 2/0 | 1/9 |
| Grimsby | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Great Yarmouth | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Guildford | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Halifax | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Harrogate | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Hartlepools | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Hastings | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Hereford | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/9 | 1/6 |
| Huddersfield | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Hull | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Ipswich | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Lancaster | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Leamington Spa | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Leeds | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Leicester | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Lichfield | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Lincoln | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Liverpool | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 2/2 | 1/9½ |
| Llanelly | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| London | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1½ | 2/0 | 1/9 |
| Loughborough | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Luton | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Maidstone | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Manchester | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Mansfield | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Merthyr Tydfil | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Middlesbrough | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Newcastle-on-Tyne | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Newport, Mon. | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Northampton | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Norwich | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Nottingham | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Oakham | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/10 | 1/6 |
| Oldham | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Oxford | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Plymouth | 1/11 | 1/11 | 1/11 | 1/11 | 1/11 | 1/11 | 1/10 | 1/7 |
| Pontypridd | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Portsmouth | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Preston | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Reading | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Rochdale | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Rochester | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/8 | 1/4 |
| Rugby | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| St. Albans | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| St. Helen's | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Scarborough | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Sheffield | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Shrewsbury | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Southampton | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Southend-on-Sea | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Southport | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| South Shields | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Stockport | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Stockton-on-Tees | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Stoke-on-Trent | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Stroud | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/8½ | 1/5 |
| Sunderland | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Swansea | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Taunton | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Torquay | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Tunbridge Wells | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Wakefield | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Walsall | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| Warrington | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| West Bromwich | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Wigan | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Windsor | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/9 | 1/5 |
| Wolverhampton | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 2/1 | 1/9 |
| Worcester | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |
| York | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/11½ | 1/7½ |

# CONTRACTS, COMPETITIONS, &c.

**For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.**

***The date given at the commencement of each paragraph is the latest date when the tender, or the name of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.***

## BUILDING AND PAINTING.

AUGUST 20.—**London.**—BUILDING WORKS.—The Commissioners of His Majesty's Works invite tenders for the execution of ordinary works and repairs to the buildings in their charge in the London District for periods of one or three years. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit, £1 1s.

AUGUST 22.—**Abercych.**—PAINTING.—External painting at Ashworth House, for Ranoth Chapel. Mr. P. Lewis, Mill, Abercych.

AUGUST 22.—**Ashford.**—BUILDER'S WORK.—Carrying out necessary works at Nos. 32 to 48, Hempsted-street, for the U.D.C. Mr. Arthur Hollis, Sanitary and Housing Inspector, High-street, Ashford.

AUGUST 22.—**Isle of Wight.**—ALTERATIONS.—Alterations and additions at Alverstone Farm, Brading, for the Isle of Wight C.C. Messrs. Stratton & Millgate, architects, Newport.

AUGUST 22.—**Kent.**—ADAPTATION.—Adapting No. 1, Aberdeen-terrace, Blackheath, for use as a hostel for men. Mr. W. H. Robinson, County Architect, Sessions House, Maidstone. Deposit £2.

AUGUST 22.—**Old Sawley.**—PAINTING.—Painting iron bridge over River Trent, for the Derbyshire C.C. Mr. J. W. Horton, County Surveyor, Derby.

✱AUGUST 22.—**Peterborough.**—BUILDING.—Erection of 20 and 37 "B" type cottages in Orton-avenue, Woodston, for the Old Fletton Urban District Council. Messrs. Bowden & Abbott, 20, Craven-street, London, W.C. 2. Deposit £2 2s.

AUGUST 22.—**Quainton.**—POLICE STATION.—Rebuilding work at Quainton police buildings, for the Bucks C.C. Mr. R. J. Thomas, Aylesbury.

AUGUST 23.—**Maldon.**—PAINTING.—Painting of iron staging and overhead tanks at the Tollesbury Water Works and Latchingdon sub-pumping station, for the R.D.C. Mr. Wm. Almond, engineer, 6, Market Hill, Maldon, Essex.

AUGUST 23.—**Wickham Bishops.**—REPAIRS.—Repairing two cottages in Kelvedon-road, Wickham Bishops, for the R.D.C. Mr. Wm. Almond, surveyor, 6, Market Hill, Maldon, Essex.

AUGUST 24.—**Bristol.**—PILES.—Eight 14 ft. by 14 ft. by 35 ft. ferro-concrete piles to be constructed on the site adjacent to the Feeder-road Electricity Works, for the T.C. Mr. H. Faraday Proctor, Engineer, The Exchange, Bristol. Deposit £1 1s.

AUGUST 24.—**Chiswick, W.**—RECONSTRUCTION OF BRIDGE.—Reconstruction and widening of bridge in Wellesley-road, Chiswick, over the London and South Western Railway and the approach thereto with all incidental work. Mr. Edward Willis, A.M.I.C.E., Surveyor, Town Hall, Chiswick.

AUGUST 24.—**Darlington.**—PAINTING.—Painting of the outside of Feetham's Infirmary; Boys' Homes, Dodmire; Girls' Homes, Nos. 101, 103, and 105, Eastbourne-road; and Medical Officer's residence, Eastbourne-road, for the Board of Guardians. Mr. C. H. Leach, Clerk, Union Offices, Darlington.

AUGUST 24.—**Pontypridd.**—PAINTING.—Painting premises of Pontypridd Markets Co. Messrs. A. O. Evans & Evans, architects, Pontypridd.

AUGUST 25.—**Barnsley.**—ALTERATIONS.—Alterations to the Union Inn, Platts Common, near Barnsley, for Messrs. H. Tomlinson, Ltd., Anchor Brewery, Sheffield. Messrs. Dyson, Cawthorne & Coles, architects, 10, Regent-street, Barnsley.

AUGUST 25.—**Bere Alston.**—HOUSE.—Erection of a house at Bere Alston. Mr. B. Priestley Shires, architect, 21, Lockyer-street, Plymouth.

AUGUST 25.—**Edinburgh.**—EXTENSION.—Extension of the laboratory, Royal Botanic Gardens, Edinburgh, Architect, H.M. Office of Works, 4–5, Drumsheugh-gardens, Edinburgh. Deposit £1 1s.

AUGUST 25.—**Huddersfield.**—PAINTING.—Painting of shops Nos. 2, 4 and 6, Manchester-road, and houses Nos. 2, 4 and 6, South Parade, for the T.C. Mr. H. Sutcliffe, Borough Architect, Huddersfield.

AUGUST 25.—**Huddersfield.**—PAINTING.—Painting at Ravensknowle Hall and lodges, Dalton, for the T.C. Mr. H. Sutcliffe, Borough Architect, 1, Peel-street, Huddersfield.

AUGUST 25.—**Manchester.**—BOATHOUSE.—Rebuilding of the boathouse at Boggart Hole Clough, for the T.C. City Architect, Town Hall, Manchester. Deposit £1 1s.

AUGUST 26.—**Glasgow.**—SUB-STATION.—Erection of Drumboyne sub-station, Greenhead, Govan, for the T.C. Electrical Engineer, 75, Waterloo-street, Glasgow.

AUGUST 26.—**Islington, N.**—REPAIRS, ALTERATIONS AND BUILDING.—Repairs and alterations, and the erection of a new bakehouse, &c., for the Guardians of the Poor of the Parish of St. Mary, Upper Holloway, N., at their Institution, St. John's-road. Mr. Edmund J. Harrison, Architect to the Guardians, 23, Berkeley-road, Crouch End, N.8. Deposit £2.

AUGUST 26.—**Islington, N.**—FIRED OVENS.—Erection and completion of two double-decker steam pipe fired ovens for the Guardians of the Poor of the Parish of St. Mary, Upper Holloway, N., at their Institution, St. John's-road. Mr. Edmund J. Harrison, Architect to the Guardians, 23, Berkeley-road, Crouch End, N.8. Deposit £2.

✱AUGUST 26.—**Stockport.**—PAINTING.—For painting the various bridges, railings, handrails and urinals in the Borough. Mr. H. Hamer, Borough Surveyor, Town Hall, Stockport.

AUGUST 26.—**Stockport.**—POINTING.—For pointing the brickwork and stonework of parapets and arches carrying Wellington-road South and the Public Steps leading from that road into Chestergate, for the T.C. Mr. H. Hamer, Borough Surveyor, Town Hall, Stockport.

AUGUST 27.—**Barry.**—HOUSES.—Erection of 110 houses for the U.D.C. Mr. E. R. Hinchsliff, architect, County Hall, Barry. Deposit £1 1s.

AUGUST 27.—**Horsham.**—EXTENSION.—Extension to engine room at Electricity Station, for the U.D.C. Electrical Engineer, Horsham. Deposit £2 2s.

AUGUST 29.—**Barton-upon-Irwell.**—PAINTING—Painting at the Union Office, Patricroft, for the U.D.C. Mr. Charles Faulkner, Clerk, Union Offices, Patricroft, Manchester

AUGUST 29.—**Lanark.**—HOUSES.—Erection of 148 dwelling-houses at Lambhill, and 12 houses at Auchinloch, for the District of the Lower Ward of Lanark. Mr. Jas. A. M'Callum, District Clerk, 15, West George-street, Glasgow. Deposit £1 1s.

AUGUST 29.—**Rotherham.**—HOUSES.—Erection of a further 130 houses on Section B of the Doncaster-road housing site for the County Borough Council (separate tenders will be accepted for any less number of houses than 130, Mr. Charles A. Broadhead, Housing Architect, St. George's Hall, Rotherham.

AUGUST 29.—**York.**—PAINTING.—Painting, &c., of various properties belonging to T.C. Mr. W. Spurr, City Engineer, Guildhall, York.

✱AUGUST 30.—**London, W.**—HUT.—Erection of a hut on the roof of the General Post Office, West London. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W. 1. Deposit £1 1s.

AUGUST 31.—**Blackpool.**—ADDITIONS.—Erection of offices, mess-room, and lavatories at the abattoirs, New-road, for the T.C. Mr. Francis Wood, Borough Engineer, Municipal Offices, Blackpool.

✱AUGUST 31.—**Brighton.**—ALTERATIONS.—Alterations to the Employment Exchange at Brighton. Contracts Branch, His Majesty's Office of Work., King Charles-street, London, S.W. 1. Deposit £1 1s.

AUGUST 31.—**London, S.W.**—ALTERATIONS.—Alterations to existing building to form Assistant Medical Officer s Quarters, at the Western Fever Hospital, Seagrave-road, Fulham, S.W.6., for the Metropolitan Asylums Board. Office of the Board, Embankment, E.C.4. Deposit £1.

AUGUST 31.—**London, N.E.**—CLEANING, PAINTING AND REPAIRS.—Cleaning, painting and repafrs at the Eastern Ambulance Station, Homerton, N.E., for the Metropolitan Asylums Board. Office of the Board, Embankment, E.C.4. Deposit £1.

✱AUGUST 31.—**Sutton, Surrey.**—CLEANING, PAINTING AND REPAIR WORKS.—Cleaning, painting and repairing works at Belmont Laboratories and stables, Stanley-road, Sutton, Surrey, for the Metropolitan Asylums Board. Office of the Board, Embankment, E.C.4. Deposit £1.

✱AUGUST 31.—**Swanley Junction, Kent.**—CLEANING, PAINTING, REPAIRS.—Cleaning, painting work and repairs at White Oak, Swanley Junction, Kent, for the Metropolitan Asylums Board. Engineer-in-Chief, Office of the Board, Embankment, E.C.4. Deposit £1.

AUGUST 31.—**Woolwich.**—REPAIRS, &C.—Repair and painting to the Dispensary and Receiving Home, Plumstead, and Union Offices, Woolwich, for the Board of Guardians. Messrs. Whincop & Parnell, architects, 42, William-street, Woolwich.

✱SEPTEMBER 1.—**Chigwell.**—BUILDING.—Alteration and provision of new class-rooms at the Chigwell Grammar School. County Architect, Old Court, Springfield, Chelmsford. Deposit £1 1s.

SEPTEMBER 1.—**Johnstone.**—PLASTERING AND PAINTING.—For the plasterer and painter work for the 114 houses to be erected at the Kilbarchan-road scheme. Messrs. Jaffrey & Lochhead, measurers, 28, High-street, Johnstone.

SEPTEMBER 2.—**Hornsea.**—ALTERATIONS.—Works of alteration at Public Rooms, for the U.D.C. Mr. W. E. Warburton, Surveyor, Public Rooms, Hornsea.

SEPTEMBER 2.—**Westminster, S.W.1.**—ALTERATIONS.—Alterations to H.M. Stationery Office, Princes-street, Westminster, S.W.1. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W.1. Deposit £1 1s.

✱SEPTEMBER 2.—**Wombwell.**—TILING AND SLATING.—Tiling and slating for 47 houses now in course of erection fo rthe Urban District Council. Mr. Norman Culley, architect, 13, John William-street, Huddersfield.

SEPTEMBER 5.—**Hornchurch, Essex.**—Heating, lighting, flooring, sewage disposal and drains, &c.—Installing a system of hot water heating, installing a system of lighting petrol gas, laying a jointless flooring throughout the hostel, Sutton's Farm, Hornchurch, for the Guardians of the Romford Union; also internal and external work necessary for completing the building, also for laying drains and installing for sewage disposal works. Mr. Raymond H. Mason, Clerk to the Guardians, Union Offices, Romford.

✱SEPTEMBER 6.—**Bristol.**—BUILDING.—Completion of the swimming bath section of the Public Baths, Gloucester-road, Bishopston, for the Baths Committee of the City and County of Bristol. City Engineer's and Surveyor's Office, 63, Queen-square, Bristol. Deposit three guineas.

SEPTEMBER 7.—**Middleton-in-Teesdale.**—HEATING CHAMBER.—Construction of a heating chamber and other builders' work in connection with the installation of a hot water heating apparatus at school, for the C.C. Mr. F. Willey, architect, 34, Old Elvet, Durham.

SEPTEMBER 7.—**Windlesham.**—MORTUARY, &C.—Erection of buildings, comprising mortuary, waiting-room, &c., entrance gates and piers and incidental works at the New Cemetery, for the U.D.C. Mr. J. E. Weeks, Surveyor, Council Offices, Bagshot. Deposit £1 1s.

✱SEPTEMBER 8.—**Durham.**—HOUSES.—Erection of 86 houses at Stanley, co. Durham. Contracts Branch, H.M. Office of Works, King Charles-street, London, S.W. 1. Deposit £1 1s.

SEPTEMBER 12.—**Bristol.**—VARIOUS WORKS.—(a) Sanitary block in connection with Wards 110, 100, and 98, at the Eastville Institution; (b) sanitary works and baths; (c) plastering three wards and two staircases, &c.; (d) conversion of buildings 81, 82, and 83, with quarters for six couples. Messrs. W. S. Skinner & Sons, architects, Orchard-street, Bristol.

✱SEPTEMBER 12.—**Edmonton Union.**—PAINTING AND REPAIRS.—Painting and repairs (*a*) the Guardians' Workhouse, known as Edmonton House; and (*b*) Chase Farm Schools, Enfield. Mr. J. C. S. Mummery, Architect to the Guardians of Edmonton Union, 34, Bloomsbury-square, W.C.1.

✱SEPTEMBER 12.—**Newcastle-on-Tyne.**—SHEDS.—Erection of electric car sheds at South Gosforth, for the North Eastern Railway. Mr. Arthur Pollard, Company's Architect, Irving House, Westgate-road, Newcastle-on-Tyne.

NO DATE.—**Bristol.**—ALTERATIONS.—For alterations and additions to warehouses and premises, Marsh-street, Bristol, for Coterell Bros., Ltd. Mr. Henry Williams, architect, 44, Corn-street, Bristol.

✱NO DATE.—**Cheshire.**—ALTERATIONS, ADDITIONS, AND REPAIRS.—Handforth Estate, near Wilmslow. Alterations, additions and repairs to the "Dairy House Farm" for conversion into two homesteads (separate contract). Cranage Estate, near Holmes Chapel. Alterations, additions and repairs to "Mill-lane Farm" for conversion into two homesteads (separate contract). County Estate Office, 16, Nicholas-street, Chester.

✱NO DATE.—**Cheshire.**—Building (farm houses) Handforth Estate, near Wilmslow, 3 pairs of cottages with outbuildings, 1 detached cottage, with farm buildings (separate contracts); Cranage Estate, near Holmes Chapel; 1 detached cottage with farm buildings, 2 detached cottages (small type) with outbuildings (separate contract). County Estate Office, 16, Nicholas-street, Chester. Deposit £2.

NO DATE.—**Ebbw Vale.**—HALL.—Erection of an amusement hall at Ebbw Vale. Messrs. Kenshole & Bevan, architects, 30, Charles-street, Cardiff.

NO DATE.—**Woodbury Salterton.**—FARMHOUSE.—Erection of farmhouse at Pilehayes Farm, Woodbury Salterton, for the Devon C.C. Mr. W. J. M. Thomasson, Architect for Small Holdings, 18, Cathedral-yard, Exeter.

## FURNITURE, MATERIALS, etc.

AUGUST 22.—**Swindon.**—RAILWAY STORES.—Supply of stores to the Great Western Railway Co. Stores Superintendent, Swindon.

AUGUST 23.—**Egypt.**—PAINTS AND OILS.—The Egyptian Delta Light Railways Ltd., invite tenders for the supply of paints and oils. Company's Office, 210-216, Gresham House, E.C.2. Charge 10s.

AUGUST 24.—**Ossett.**—FITTINGS.—Supplying and fitting of chemical bench, physics bench, and 30 stools at the Grammar School. Mr. E. Lucas, Town Hall, Ossett.

AUGUST 29.—**Egypt.**—CEMENT.—The Director-General of the Ports and Lighthouses Administration at Alexandria invites tenders for the supply of 100 tons of cement. Department of Overseas Trade, 35, Old Queen-street, Westminster, S.W. 1.

AUGUST 31.—**Camberwell.**—MATERIALS.—Supply of builders' materials, engineering goods, etc., to the St. Giles Board of Guardians. Mr. E. E. Mott, Clerk, 29, Peckham-road, S.E.

AUGUST 31.—**Stockton-on-Tees.**—MATERIALS.—Supply of materials to the T.C. Borough Engineer, Stockton.

AUGUST 31.—**Warrington.**—MATERIALS.—Supply of stores to the Gas Department. Mr. W. S. Haddock, General Manager, Gas Offices, Warrington.

SEPTEMBER 7.—**Johannesburg.**—STREET ORDERLY BINS.—Supply of 50 street orderly bins to the Municipal Council. Dept. of Overseas Trade, 35, Old Queen-street, S.W.

SEPTEMBER 7.—**Westminster.**—STORES.—Supply of stores to the C.C. Mr. John Hunt, Town Clerk, City Hall, W.C. 2.

SEPTEMBER 8.—**West Ham.**—MATERIALS.—Supply to the Board of Guardians of builders' and engineers' materials, oils, etc., for three months. Clerk, Union-road, Leytonstone.

SEPTEMBER 12.—**Marylebone.**—MATERIAL.—Material, fodder, ironmongery, chandlery, &c., for a period of six months commencing October 1, for the Metropolitan Borough of St. Marylebone. Mr. James Wilson, Town Clerk, Town Hall, Marylebone-road, N.W.1.

SEPTEMBER 19.—**Marylebone, N.W.1.**—MATERIALS AND WORK.—Materials (building, &c.) and work for a period of six months commencing October 1, 1921. for the Metropolitan Borough of St. Marylebone. Mr. J. Paget Waddington, Borough Engineer and Surveyor, Town Hall, Marylebone-road, N.W.1.

## ENGINEERING, IRON AND STEEL

AUGUST 20.—**Egypt.**—MATERIALS, &C.—Supply of brass, copper, iron bars and plates, &c., to the Director-General of Ports and Lighthouses Administration at Alexandria. Inquiry Room, Department of Overseas Trade, 35, Old Queen-street, S.W. 1.

AUGUST 20.—**Mansfield.**—SALVAGE PLANT.—Erection of salvage plant at the Health Depot, comprising: (1) Refuse screening plant in two units, with total capacity of 100 tons per day, cinder washers, elevators and conveyors; (2) steel-framed building; (3) extension of tipping platform for the T.C. Mr. Waude Thompson, Borough Engineer, Market-street, Mansfield. Deposit £2 2s.

AUGUST 20.—**Stone.**—PUMPING ENGINE.—Provision and erection of a steam pumping engine of about 30 B.H.P. at the Waterworks of the U.D.C. Mr. R. C. Frain, M.I.C.E., 39, Albion-street, Hanley, Stoke-on-Trent. Deposit £1 1s.

AUGUST 20.—**Stone.**—BOREHOLE.—Sinking a 21 to 12-inch borehole, 500 ft. deep, at the Waterworks of the U.D.C. Mr. R. C. Frain, M.I.C.E., 39, Albion-street, Hanley, Stoke-on-Trent. Deposit £1.

AUGUST 22.—**Belfast.**—ELECTRIC PLANT.—Supply of boilers, pump, &c., to the Electricity Committee of the T.C. Mr. T. W. Bloxam, City Electrical Engineer, Belfast.

AUGUST 22.—**Manchester.**—CABLE DUCT.—Construction of cable duct under the Rochdale Canal, for the T.C. City Engineer, Town Hall, Manchester. Deposit £2 2s.

AUGUST 22.—**Waltham Abbey.**—SUPERSTRUCTURE.—Construction of the superstructure of a filter-house, formation of paths, &c., at the pumping station, for the Metropolitan Water Board. Mr. H. E. Stilgoe, Chief Engineer, 173, Rosebery-avenue, E.C. Deposit. £5.

AUGUST 23.—**Dundee.**—PUMP.—Supply and erection of a petrol or paraffin motor-driven pump. Mr. J. Hannay Thompson, General Manager, Harbour Chambers, Dundee.

AUGUST 23.—**Easington.**—HEATING.—Installation of heating system and hot water supply at Isolation Hospital, for the R.D.C. Mr. F. W. Girven, Surveyor, Council Offices, Easington.

AUGUST 23.—**London.**—RAILWAY MATERIAL.—Supply to the Great Indian Peninsula Railway Company of (1) steel work for bridges, (2) laminated springs, (3) steel screw couplings, &c., (4) crank axles and straight axles. Mr. R. H. Walpole, Secretary, 48, Copthall-avenue, E.C. 2. Charge, £1 for 1, 2 and 3, and 10s. for 4.

AUGUST 24.—**Dewsbury.**—IRONWORK.—Supply of ironwork for sewage disposal works, for the T.C. Messrs. J. Diggle & Son, engineers, 14, Brown-street, Manchester. Deposit £1 1s.

AUGUST 24.—**London.**—SPRINGS, ETC.—Supply to the East Indian Railway of (1) Helical and volute springs; (2) steel boiler and flue tubes. Mr. G. E. Lillie, Secretary, Nicholas-lane, E.C. Charge £1 1s.

AUGUST 29.—**Edinburgh.**—VARIOUS WORKS.—For open cuttings and tunnel between the power station site and coal sidings site, including the construction of a coal bunker and access shaft and the earthworks for coal sidings and the laying of permanent way and ballasting for same, for the T.C. Engineer, Dewar-place, Edinburgh. Deposit, £3 3s.

AUGUST 29.—**Johannesburg.**—MACHINERY.—Erection of machinery, &c., for extension of by-products plant, municipal abattoirs, Johannesburg. Messrs. E. W. Carling & Co., St. Dunstan's-buildings, St. Dunstan's-hill, London, E.C. 3. Deposit £1 1s.

AUGUST 31.—**London.**—ELECTRIC INSTALLATION.—Installing electric light of wards at Grove Hospital, Tooting-grove, for the Metropolitan Asylums Board. Offices, Embankment, E.C. 4. Deposit £1.

AUGUST 31.—**London.**—MATERIALS.—Supply to the South Indian Railway Co. of (1) Laminated, volute, and helical springs; (2) brushes; (3) rivets, nuts, and springs; (4) copper plates for locomotive fireboxes. Company's Offices, 91, Petty France, Westminster, S.W.1. Charge £1 for (1) and 10s. each for others.

AUGUST 31.—**Manchester.**—PIPES.—Supply and erection at Barton Power Station of low-pressure steam and water pipes, for the T.C. Mr. F. E. Hughes, Sec., Electricity Dept., Town Hall, Manchester. Deposit. £1 1s.

SEPTEMBER 3.—**Macduff.**—SLIPWAY.—Construction of steel cradle, &c., for slipway. Mr. H. Henderson, engineer, 21, Bridge-street, Aberdeen. Deposit £2 2s.

SEPTEMBER 6.—**Edinburgh.**—POLES.—Supply of steel tramway poles, &c. Tramways Manager, 2, St. James'-square, Edinburgh.

SEPTEMBER 7.—**Queensborough.**—WATERWORKS.—Supply and fixing of deep well pumps and construction of ferro-concrete storage reservoir, for the T.C. Mr. H. Small, Borough Surveyor, Queensborough. Deposit £2 2s.

SEPTEMBER 7.—**Ventnor.**—PIER WORKS.—Repairs to tie rods, &c., to the Royal Victoria Pier and Landing Stage, for the U.D.C. Mr. D. V. Howard, Surveyor, Town Hall, Ventnor, I.W.

SEPTEMBER 9.—**South Africa.**—FILTER PLANT.—Supply and erection for the Rand Water Board of a complete installation of mechanical or other filters capable of filtering 5½ million gallons of water per 24 hours at the Vereeniging Main Pumping Station. Enquiry Room of the Department of Overseas Trade, 35, Old Queen-street, Westminster, S.W.1.

SEPTEMBER 17.—**Wallasey.**—IRON WORK.—Supply of 12 cast-iron compressors, with steel tie rods and plates, for the attachment of landing-stage moorings. Messrs. Wilton & Bell, engineers, Westminster-chambers, 1, Crosshall-street, Liverpool. Deposit £1 1s.

SEPTEMBER 21.—**Barnes.**—PUMPING PLANT.—Supply and erection of semi-Diesel engines, centrifugal pumps and shafting at Barn Elms, Barnes, for the Metropolitan Water Board. Mr. H. E. Stilgoe, engineer, 173, Rosebery-avenue, E.C. Deposit, £1 1s.

OCTOBER 15.—**Wallasey.**—LANDING STAGE.—Construction of new floating goods landing stage, approximately 320 ft. in length and 80 ft. in breadth, for the T.C. Messrs. Wilton & Bell, engineers, Westminster Chambers, 1, Crosshall-street, Liverpool. Deposit £5 5s.

NO DATE.—**Salford.**—LAMP PILLARS, &C.—Supply of lamp pillars and swan necks, suitable for street lighting. Superintendent, Lighting Department, Wilburn-street, Salford.

## ROAD, SANITARY, AND WATER WORKS.

AUGUST 20.—**Dunmow.**—STEAM ROLLERS.—Hire of 2 steam rollers for a minimum period of sixty days, for the R.D.C. Mr. A. E. Floyd, Clerk, Dunmow.

AUGUST 20.—**South Queensferry.**—SEWERS.—Construction of 9 in. cast iron syphons across Port Edgar Railway, and the laying of about 250 yards of 9 in. and 12 in. fireclay main sewers adjoining, for the T.C. Mr. W. M. Scott, architect, Linlithgow.

AUGUST 20.—**Tadcaster.**—WATER MAINS, ETC.—Providing and laying about 520 yards of 2 in. and 3 in. cast-iron water pipes, with valves, etc., together with the erection of a water storage tank, for the R.D.C. Mr. H. C. Wood, Sanitary Surveyor, Tadcaster.

AUGUST 22.—**Alfreton.**—WATERWORKS.—Supply of pipes, &c., and laying about 6,750 yards of pipes for the U.D.C. Mr. R. F. Ward, water engineer, King-street, Alfreton.

AUGUST 23.—**Easington.**—ROADS, &C.—Making up of private streets, for the R.D.C. Mr. J. G. Heslop Highway Surveyor, Castle Eden. Deposit £2.

AUGUST 24.—**Maidstone.**—SEWERAGE WORKS.—Construction of sewage works at Bearsted, for the R.D.C. Mr. T. A. Busbridge, Surveyor, King-street, Maidstone. Deposit £2 2s.

AUGUST 26.—**Kettering.**—SEWERAGE WORKS.—Construction of sewage works at Burton Latimer, for the R.D.C. Messrs. Pick, Everard & Keay, 6, Millstone-lane, Leicester. Deposit £2 2s.

AUGUST 26.—**Loughborough.**—WATER MAINS.—Extension of mains, Shepshed, for the T.C. Mr. A. H. Walker, Waterworks Engineer, Town Hall, Loughborough.

AUGUST 26.—**Manchester.**—RECREATION GROUND.—Extension to Kemp-street Recreation Ground, Oldham-road, for the T.C. City Engineer, Town Hall, Manchester. Deposit £2 2s.

AUGUST 27.—**Edmonton.**—SEWERAGE WORKS.—For sewering 16 houses in Raynham-road, for the U.D.C. Mr. C. Brown, Engineer, Town Hall, Edmonton.

AUGUST 27.—**Kidderminster.**—SEWERAGE WORKS.—Construction of sewerage works at Worcester-road and Foley Park, for the T.C. Messrs. Wilcox & Raikes, Engineers, 63, Temple-row, Birmingham. Deposit £3 3s.

AUGUST 28.—**Llantrisant.**—ROADS AND SEWERS.—Construction of roads and sewers in connection with Beddam, Tonyrefail, and Tonteg housing sites, for the R.D.C. Messrs. Thomas & Morgan & Partners, Architects, 23, Gelliwasted-road, Pontypridd. Deposit £2 2s. each contract.

AUGUST 29.—**Bolton-upon-Dearne.**—BOWLING GREEN, &C.—Laying of bowling green and tennis courts in connection with housing scheme of the U.D.C. Messrs. Garside & Pennington, architects, Ropergate, Pontefract.

SEPTEMBER 1.—**Tangier.**—EARTHWORKS.—Construction of earthwork on the Arbaoua section of the Tangier-Fez Railway. Department of Overseas Trade, 35, Old Queen-street, S.W.

SEPTEMBER 6.—**Birmingham.**—WATER SUPPLY.—Providing and laying of 12,900 lineal yards of cast-iron water pipes, 1¼ in. to 3 in., &c., for the T.C. Town Clerk's Office, Council House, Birmingham. Deposit £1 1s.

NOVEMBER 17.—**Uruguay.**—WATER AND DRAINAGE WORKS.—Construction of water and drainage works at San José. Department of Overseas Trade, 35, Old Queen-street, S.W.

## Competitions.

(*See Competition News, page* 218.)

## Auction Sales, Tenders, etc.

AUGUST 17 AND 31—SEPTEMBER 14 AND 28.—**London, S.E.**—Mr. Frank G. Bowen will sell salvage stock of imported timber (the greater portion slightly damaged by water only), mahogany, American white wood, Quebec birch, &c. Auctioneer, 62a, Aldersgate-street and Hare-court, London, E.C.1.

✱AUGUST 23.—**London, E.**—Messrs. Joseph Hibbard & Sons will sell (without reserve) upon the site, Odam's Wharf, North Woolwich-road (close to Tidal Basin Station, G.E. Rly.), by order of B. Goodman, Esq., to clear site, numerous building material, timber, steel joists, &c. Auctioneers, Newington Green, Islington, N.16.

AUGUST 24.—**Battersea.**—Messrs. John Lake & Co. will sell without reserve at Longhedge Works, Silverthorne-road, Battersea, S.W., building materials, timber, rolled glass, wire netting, etc. Auctioneers, Milford M. Godalming, Surrey.

✱AUGUST 24.—**London, N.E.**—Messrs. Veryard & & Yates will sell, without reserve, from demolition of the old 10th County of London Drill Hall, Mare-street, Hackney, large assortment of building material. Auctioneers, 365, Norwood-road, S.E.27.

✱AUGUST 31.—**Wilts.**—Messrs. Teagle & Sons will sell, at the King's Arms Hotel, Malmesbury, private villa residence and garden, together with a very fine set of well-lighted workshops, stores and offices. Auctioneers, Little Somerford, and 61, Market-place, Chippenham, Wilts.

SEPTEMBER 5.—**Bramley, Hants.**—Messrs. Simmons & Sons will sell, by direction of the Disposal Board, at Bramley Stores, Bramley, Hants., adjoining Bramley Station, G.W.R. (4 miles from Basingstoke 12 from Reading), materials, stores, &c. Auctioneers 39, Belgrave-street, Reading and Henley-on-Thames and Basingstoke.

✱SEPTEMBER 15.—**Ascot.**—Messrs. Knight, Frank & Rutley will sell at The Royal Ascot Hotel, Ascot, Freehold Building Land and Small Properties, being the remaining portion of the Englemere Hill Estate, comprising about 18 acres. Auctioneers, 20, Hanover-square, London, W. 1.

✱SEPTEMBER 27.—**London, E.C.**—Mr. Frederick Brown Gurney, of the firm of Messrs. Rutley, Vine & Gurney, the person appointed by Mr. Justice Peterson, will sell, at the London Auction Mart, the estate of Charles Townley (deceased), situate Orwell, Cambs. Auctioneers, 6, George-street, Euston-road, London, N.W.1.

## Public Appointments.

AUGUST 26.—**Brixton.**—Visiting Teacher of Building Construction and Calculations at the School of Building, Ferndale-road, Brixton, S.W. 4, required by the L.C.C. for classes for builders' apprentices for two afternoons a week. Education Officer (T 1a) Education Offices, Victoria Embankment, W.C. 2.

AUGUST 26.—**London.**—Visiting Teachers required by the L.C.C.—Metal plate, building construction, painting and decorating; also permanent teacher at School of Building Preference will be given to candidates who have served or attempted to serve with H.M. Forces. Education Officer (T.1a), Education Offices, Victoria Embankment, W.C.2.

✱SEPTEMBER 7.—**Essex.**—Chief Assistant, Town Planning Section, required in the office of the Borough Engineer and Surveyor, by the County Borough Council. Mr. Robt. H. Dyer, Borough Engineer and Surveyor, Office, Southend-on-Sea.

**The Stratford Conflagration: View of the Fire Area.**

[This view shows the timber yard of Messrs. J. Gliksten & Son, Ltd., at Stratford, after the recent fire. It is interesting to note that the roofs over some of the buildings remain intact. They were exposed to fire of great intensity and long duration, and neither the hollow-brick roofs nor the fire-proofed steel joists were affected. The fire-resisting roofs and the fire-resisting covering to the steel joists were carried out by the Kleine Patent Fire-Resisting Flooring Syndicate, Ltd., and these are the only buildings involved in the fire which are now standing.]

# PROPOSED NEW BUILDINGS AND OTHER WORKS.*

**In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council**

ABERDEEN.—Plans passed: Garage, Old Mill-road, for Mr. R. G. Garvie; additions, 365-369, Great Northern-road, Mr. G. Watt, for Mr. R. Laing; reconstruction of premises, Clarence-street, Messrs. Walker & Duncan, for the Northern Agricultural Co.; additions, 18, Rubislaw-terrace, Mr. A. H. L. MacKinnon, for Mr. T. Adam.

BECONTREE.—It is not possible to begin the erection of a church at Becontree in memory of Bishop Stevens, but the Bishop of Chelmsford hopes to arrange at a cost of £5,000 for the building of a hall, which can be used until something better is provided.

BEDWELTY.—The U.D.C. has received the sanction of the Ministry of Health to the borrowing of £5,000 to construct the Fleur-de-lis to Blackwood main.

BLACKBURN.—Plans passed by T.C.: Garage, Follywell-street, by Mr. Thos. Harrison; cinema théatre, Bolton-road, by Mr. Thomas Fox; urinals, Nuttall-street, by Blackburn Rovers Football Club; two sculleries, 61 and 63, Ordnance-street, by Mr. John Aspin; bungalow, Pleckgate, by Mr. J. Whalley.

BLAYDON.—The U.D.C. has instructed the Surveyor to prepare plans and sections showing a suitable position for a bridge at Cowens Crossing.

BRIGG.—An inquiry has been held into the application of the U.D.C. to borrow £4,500 for waterworks extension.

BURNHOPE.—The Durham C.C. has purchased a site for a school.

CHAPEL-EN-LE-FRITH.—Plans passed by R.D.C.: Garage, Chorley, for Mr. G. Hutton; alterations, Haslin, for Buxton Line Film Co.; garage, Benford, for A. F. Hanesch, Ltd.; office, Market-street, Chapel-en-le-Firth, for London County and Westminster Bank; bungalow, Horwich End, Whaley Bridge, for Mr. H. Potter.

CHATHAM.—Plans passed by T.C.: Extension, 255, High-street, for Eastman's, Ltd.; bungalow, Turbery-avenue, for Mr. H. G. Mann; alterations, 33, High-street, for Mr. Ansell; nine houses, Maidstone-road, for Mr. W. A. Watson.

COSELEY.—The U.D.C. have received the sanction of the Ministry of Health to loans for housing purposes, and are now authorised to apply for one of £51,923 for present needs in connection with the erection of dwellings under a contract.

DORCHESTER.—Plans passed by T.C.: Motorshed, Maunbery-road, for Messrs. G. Ford; addition, South-street, for International Stores Co.

DURHAM.—The Durham County E.C. has submitted sketch plans for new schools to the Board of Education as follows: At Hunwick, estimated to cost £21,805; at Fishburn, estimated to cost £21,581; at Sunnyside, estimated to cost £12,000; and at West Carnforth, estimated to cost £31,062.—It is proposed to erect additional accommodation at the Durham Girls' County School at an estimated cost of £6,237.

EALING.—A town-planning scheme for the northern portion of Ealing has been prepared. It is proposed that most of the land shall be allocated to good-class residential houses, but about 35 acres may be allotted to factories.

HAVERTON HILL.—The Rev. V. Revill and others propose to provide a R.C. school at Belasis Garden City.

HENDON.—Plans passed by U.D.C.: Garage, Garrick-avenue, Mr. E. Wright; house, Wildwood-road, Mr. J. C. S. Soutar; workshops and offices, Finchley-road, King, Freeman & Co.; two garages, Hamsptead Way, Messrs. Quennells; bungalow, Elmcroft-avenue, Mr. E. Dymock; pair of semi-detached houses, Albert-road, Mr. H. Kichenside; alterations and drainage, 48, Church-road, Wilson & Co.; house, Wise-lane, Mill Hill, Mr. W. Rowland; pair of semi-detached houses, Holders Hill-road, Mr. W. Epps; extensions to Hendon Cottage Hospital; alterations and additions to "Whitemeade," Uphill-road, Mr. J. Wilson; alterations to bungalow, Well-garth-road, Mrs. A. Hammerton; house, Basinghill, Mr. Bristow.

HOVE.—Plans passed by T.C.: Conversion into flats, 30, First-avenue, Mr. T. H. Buckwell, for Mrs. Toomer; conversion into flats, 32, Cromwell-road, Messrs. W. Willett, Ltd., for Mr. W. R. Hewson; five detached houses, Gladys-road, Mr. J. M. Coomber, for Mr. J. Coomber; two pairs semi-detached houses, Raphael-road, Mr. C. J. Payne; pair of semi-detached bungalows, Langdale-road, Messrs. C. H. Burstow & Sons; motor garage, Wilbury-crescent, S.W., Mr. W. H. Overton, for Mr. S. Elliott; alterations, 48, 49, 50 and 51, Western-road, Messrs. T. Garrett & Son, for Messrs. W. Hill, Ltd.; addition, 1, Waterloo-street, Messrs. J. H. Hackman, Ltd., for Mr. Fairburn; alterations, 4, Queen's-gardens, Mr. H. Elwig, for The Princes Hotel, Co., Ltd.; motor garage, Hallyburton-road, Mr. E. Gladman, for Mr. H. Russell; motor garage, Richardson-road, Mr. W. H. Overton, for Mr. Maurice; conversion into flats, 14, Brunswick-terrace, Mr. A. Carden, for Mr. N. Foley.

KING'S LYNN.—Plans approved by T.C.: New central stores, Norfolk-street, for the King's Lynn Co-operative Society; open shed, King-street, for Messrs. G. M. Bridges & Son.

LEAMSIDE.—The Durham C.C. has purchased a site for a school.

MERRINGTON.—A site of four acres has been purchased from the Dean and Chapter of Durham by the Durham C.C. for a school.

MERTHYR.—Plans passed: Theatre on site of Castle Hotel; additions, 43, Aberfan-road, for Mr. E. Rees; bonded stores, for Messrs. D. Morgan & Co.

READING.—Plans passed: Additions, 62, Friar-street, for the executors of the late Mr. F. Blatch; additions, Church-street, for Caversham Motors, Ltd.; cloak room, &c., 153, Friar-street, for Messrs. Hicksie & Hicksie; store, Northumberland-avenue, for Mr. A. C. Cox; shop and house, Wokingham-road, for Mr. G. E. Love; garage, 38, Kidmore-road, for Mr. C. H. Samuell; sanitary additions, "The Plough," Tilehurst, for Messrs. H. & G. Simonds; two pairs of semi-detached houses, Woodcote-road, for Mr. W. R. Smith; pair of semi-detached houses, Matlock-road, for Mr. W. R. Smith; pair semi-detached houses, Victoria-road, Tilehurst, for Mr. T. Francis.

SHEFFIELD.—Plans passed by T.C.:—House, Traplane, for Mr. E. Day; house, Clarendon-road, for Mr. A. W. Morrison; house and garage, Whirlowdale-road, for Mr. T. H. Robinson; house, Cobnar-road, for Mr. H. J. Taylor; house, Cobnar-road, for Mr. H. C. Smeeton; 6 houses, Armthorpe-road, for Mr. James Samuel; two bungalows, Armthorpe-road, for Mr. James Samuel.

WALTHAMSTOW.—Plans passed by U.D.C.: Thirteen houses, Nelson-road, for Mr. T. Baker; vicarage, Brookscroft-road, for Messrs. J. Hamilton & Son; factory addition, St. Andrews-road, for Mr. A. Attwell; stables, Exeter-road, for Messrs. West Bros. & Pettet.

WARE.—Plans have been approved for the drainage of Great Munden Bury, for Mr. J. R. Child, and for a new club house off High-street, Stanstead Abbotts.

WEST HAM.—It has been decided to rebuild the portion of the Theatre Royal, Stratford, E., destroyed by fire.

## FIRES.

ABERDEEN.—A fire has completely gutted the store-room in the engine shop of Alexander Wilson (Aberdeen), Ltd., engineers, Ashgrove-road.

COLCHESTER.—A fire, by which the G.E.R. goods shed at Hythe was destroyed, has occurred.

DUNDEE.—Damage estimated to amount to about £2,000 has been done by fire in the premises of Mr. James Aimer, coffee and spice merchant, 64, Cowgate.

HALIFAX.—The mansion of Mr. W. A. Simpson, Hinchcliffe, situated in Cragg Vale, six miles from Halifax, has been destroyed by fire, the damage being estimated at £150,000.

RUGBY.—A fire has occurred in the workshop at the back of Messrs. S. Robbins's furniture showrooms in Henry-street.

## Tenders for Cement.

The Director-General of the Ports and Lighthouses Administration, Alexandria, has invited tenders to be submitted by noon on August 29 for the supply of 100 tons of cement. Local representation is essential. The Department of Overseas Trade is in a position to supply names of firms with Egyptian connections who might be prepared to act for United Kingdom firms not represented in Egypt who wish to submit tenders. A copy of the conditions of tender may be inspected by United Kingdom manufacturers and suppliers on application at the Enquiry Room of the Department of Overseas Trade, 35, Old Queen-street, Westminster, S.W. 1. A limited number of copies are also available for loan to firms in the provinces who have not London offices. Applications for these should bear the reference number 5721/F.E./P.N.

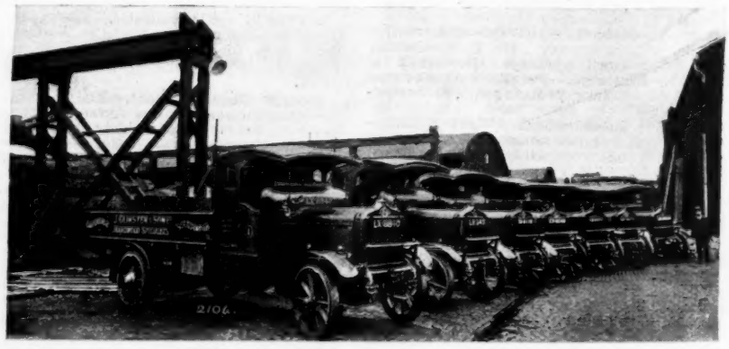
## Obituary.

The death has taken place of Councillor George Waterson, builder, of High Stanners, Morpeth, who was an ex-Mayor of Morpeth.

## Motor Traction.

The fleet of "A. E. C." 45-h.p. 4-ton lorries, illustrated below, have been specially built for the transport of timber, and are in use for that purpose by Messrs. J. Gliksten & Sons. They are made by the Associated Equipment Co., Ltd., of Walthamstow, and embody in their design and manufacture the experience gained by that firm in the construction of the omnibuses for the London General Omnibus Co.

The other illustration shows the adaptation of a "Fordson" tractor, supplied by Messrs. J. Blake & Co., of Bold-street, Liverpool, to the driving of a mortar mill for Messrs. Griffiths, Son, and Cromwell, of Liverpoool. From records taken on this job it was found that in an eight-hour day 24 pans, each containing 10 cwt. of mortar were produced on two-thirds of a pint of petrol and eight gallons of paraffin, the total cost of fuel oil and lubricating oil working out at 10s. 8d. for 12 tons of mortar.



**Fleet of "A. E. C." Timber Lorries.**

**"Fordson" Tractor Driving a Mortar Mill.**

* See also our List of Contracts, Competitions, etc.

# PRICES CURRENT OF MATERIALS.*

**[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. Since our last issue various revisions have been made.—Ed.]**

## BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge. £ s. d.

Best Stocks ..... 5 1 6

Per 1000, Delivered at London Goods Stations.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Flettons ..... | 3 17 0 | Best Blue Pressed Staffordshire ... | 11 19 0 |
| Best Stourbridge Fire bricks ..... | 12 14 0 | Do. Bullnose .. | 12 9 0 |
| | | Blue Wire Cuts | 10 1 6 |
| GLAZED BRICKS— | | | |
| Best White, Ivory, and Salt Glazed Stretchers .. | 28 10 0 | D'ble Str'tch'rs | 37 0 0 |
| | | D'ble Headers | 34 0 0 |
| | | One Side and two Ends .. | 38 0 0 |
| Headers ..... | 28 0 0 | Two Sides and one End .... | 39 0 0 |
| Quoins, Bullnose and 4½in. Flats ..... | 35 0 0 | Splays and Squints..... | 36 10 0 |

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

| | s. d. | | |
|---|---|---|---|
| Thames Ballast ..... | 16 6 | per yard, | delivered 2 miles radius Paddington. |
| Pit Sand ..... | 21 0 | " " | |
| Thames Sand ..... | 21 6 | " " | |
| Best Washed Sand ..... | 21 6 | " " | |
| ½ in. Shingle for Ferro-Concrete ..... | 21 0 | " " | |
| ¼ in. " " ..... | 22 0 | " " | |

Per ton. delivered in London area.

| | £ s. d. | | £ s. d. |
|---|---|---|---|
| Best Portland Cement ..... | 4 7 6 | .. | 4 13 0 |

80/6 alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above .. .. 10 0

Best Ground Blue Lias Lime 3 12 6 at rly. depot.

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks. The sacks are charged at 2s. 6d. each and credited at 2s. each if returned in good condition within three months.

Grey Stone Lime ..... 74s. 0d. per ton delivered.

Stourbridge Fireclay in s'cks 44s. 8d. per ton at rly. dpt.

## STONE.

| | s. d. |
|---|---|
| BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube..... | 3 2½ |
| Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube ..... | 3 5½ |
| Do. do. delivered on road wagons at Nine Elms Depot ..... | 3 6½ |
| PORTLAND STONE— | |
| Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L.& S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube ..... | 4 11½ |
| Do. do. delivered on road wagons at above stations, per ft. cube.. ..... | 5 0½ |

White basebed, 3d. per ft. cube extra.

NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

YORK STONE, BLUE—*Robin Hood Quality.*

| Delivered at any Goods Station London. | s. d. |
|---|---|
| Scappled random blocks .....Per Ft. Cube | 14 5 |
| 6 in. sawn two sides landings to sizes (under 30 ft. super.) .....Per Ft. Super | 9 0 |
| 6 in. rubbed two sides, ditto ..... " | 10 1 |
| 3 in. sawn two sides slabs (random sizes) " | 3 11 |
| 2 in. to 2½ in. sawn one side slabs (random sizes) ..... " | 2 5 |
| 1½ in. to 2 in. ditto, ditto ..... " | 2 0 |

HARD YORK—

| Delivered at any Goods Station London. | s. d. |
|---|---|
| Scappled random blocks .....Per Ft. Cube | 9 3 |
| 6 in. sawn two sides landing to sizes (under 40ft. super.) .....Per Ft. Super | 8 6 |
| 6 in. rubbed two sides ditto ..... " | 10 4 |
| 4 in. sawn two sides slabs (random sizes) " | 4 11 |
| 3 in. ditto, ditto " | 4 0 |
| 2 in. self-faced random flags ..Per Yard Super | 12 2 |

## WOOD.

GOOD BUILDING DEAL.

| Inches | £ s. | |
|---|---|---|
| 4 × 11 ..... | 50 0 | per standard |
| 4 × 9 ..... | 45 0 | " |
| 4 × 8 ..... | 40 0 | " |
| 4 × 7 ..... | 35 0 | " |
| 3 × 8 ..... | 32 0 | " |
| 3 × 7 ..... | 30 0 | " |
| 2½ × 7 ..... | 30 0 | " |
| 3 × 6 ..... | 28 0 | " |
| 3 × 11 ..... | 50 0 | " |
| 2 × 11 ..... | 50 0 | " |
| 3 × 9 ..... | 42 0 | " |
| 2½ × 9 ..... | 44 0 | " |
| 3 × 4½ ..... | 32 0 | " |
| 3 × 4 ..... | 30 0 | " |

PLANED BOARDS.

| | | |
|---|---|---|
| 1 × 11 ..... | 60 0 | " |
| 1 × 9 ..... | 50 0 | " |

PLAIN EDGE FLOORING.

| Inches | | |
|---|---|---|
| ½ ..... | 22/6 | per square |
| ¾ ..... | 26/6 | " |
| 1 ..... | 29/6 | " |
| 1¼ ..... | 35/- | " |
| 1½ ..... | 45/- | " |

TONGUED AND GROOVED FLOORING.

| Inches | | |
|---|---|---|
| 1 ..... | 29/6 | per square |
| 1¼ ..... | 35/- | " |
| 1½ ..... | 45/- | " |

## WOOD (*Continued*).

MATCHINGS (BEST).

| Inches | | |
|---|---|---|
| ½ ..... | 21/- | per square |
| ¾ ..... | 23/- | " |
| 1 ..... | 30/- | " |

BATTENS.

| Inches | s. d. | |
|---|---|---|
| ½ × 2 ..... | 3 6 | per 100 ft. |

SAWN LATHS.

| | | | | | |
|---|---|---|---|---|---|
| Per bundle ..... | | | 0 | 4 | 0 |
| Dry Wainscot Oak, per ft. super, as inch ..... | 0 | 2 6 | to | 0 | 3 0 |
| ½ in. do. do. | 0 | 1 10½ | to | 0 | 2 6 |
| Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch .... | 0 | 2 3 | to | 0 | 3 0 |
| Cuba Mahogany ..... | 0 | 3 6 | to | 0 | 4 0 |
| Teak (Rangoon, Moulmein or Java), per load.. .. | 52 | 10 0 | to | 55 | 0 0 |
| American Whitewood planks, per ft. cube .. | 0 | 16 0 | to | 0 | 18 0 |
| Best Scotch Glue, per cwt. | 10 | 0 0 | to | — | |
| Liquid Glue, per cwt..... | 5 | 8 0 | to | 6 | 15 0 |

## SLATES.

1st quality slates from Bangor or Portmadoc in truck load delivered London area. Per 1,000 of 1,200.

| | | £ s. d. |
|---|---|---|
| Best Blue Bangor Slates, | 24 by 12 ..... | 56 10 0 |
| " " " | 22 by 12 ..... | 46 0 0 |
| First quality" " | 22 by 11 ..... | 42 10 0 |
| " " | 20 by 12 ..... | 42 0 0 |
| Best Blue Portmadoc | 20 by 10 ..... | 36 10 0 |
| " " | 18 by 10 ..... | 29 10 0 |
| First quality " | 18 by 9 ..... | 24 5 0 |
| " " | 16 by 10 ..... | 22 15 0 |
| " " | 16 by 8 ..... | 18 0 0 |

## TILES.

| | Per 1,000 f.o.r. London. £ s. d. |
|---|---|
| Best machine-made tiles from Broseley or Staffordshire district..... | 7 15 0 |
| Ditto hand-made ditto..... | 8 10 0 |
| Ornamental ditto ..... | 7 7 6 |
| Hip and valley tiles (per dozen) ..... | 0 15 0 |

## METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION PER TON—

| | £ s. d. |
|---|---|
| R. S. Joists, cut and fitted ..... | 22 0 0 |
| Plain Compound Girders ..... | 25 0 0 |
| " Stanchions ..... | 27 0 0 |
| In Roof Work ..... | 32 0 0 |

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £15 net value delivered direct from works. 5 per cent. less above gross discounts, carriage forward if sent from London stocks.)

| | Tubes. ¼" to 2". 2½" to 6". | | Fittings. ¼" to 2". 2½" to 6". |
|---|---|---|---|
| Gas..... | —25 | —30 .. | —30 —37½ |
| Water .... | —15 | —21½ .. | —25 —35 |
| Steam .... | — 3½ | —11½ .. | —20 —32½ |
| Galv'd Gas | — 5 | —10 .. | —22½ —30 |
| " Water | + 7½ | + 1½ .. | —17½ —27½ |
| " Steam | +20 | +12½ .. | —12½ —25 |

L.C.C. COATED SOIL PIPES—London Prices ex works.

| | Pipe. s. d. | | Bends, stock angles. s. d. | | Branches, stock angles. s. d. |
|---|---|---|---|---|---|
| 2 in. per yd. in 6 fts.. | 5 10½ | .. | 4 2 | .. | 5 0 |
| 2½ in. " .. | 7 0½ | .. | 4 7 | .. | 6 3 |
| 3 in. " .. | 8 4½ | .. | 5 0 | .. | 7 6 |
| 3½ in. " .. | 9 3 | .. | 6 3 | .. | 8 9 |
| 4 in. " .. | 10 7 | .. | 7 1 | .. | 10 0 |

RAIN-WATER PIPES, &C.

| | Pipe. s. d. | | Bends, stock angles. s. d. | | Branches, stock angles. s. d. |
|---|---|---|---|---|---|
| 2 in. per yd. in 6fts. plain | 5 2 | .. | 2 6 | .. | 3 5 |
| 2½ in. " " .. | 5 9 | .. | 3 0 | .. | 4 2 |
| 3 in. " " .. | 6 8 | .. | 3 8 | .. | 5 6 |
| 3½ in. " " .. | 7 9 | .. | 4 4 | .. | 6 5 |
| 4 in. " " .. | 8 10 | .. | 5 4 | .. | 7 0 |

L.C.C. DRAIN PIPES.—9 ft. lengths. London Prices. per yd.: 4 in., 10/3. .. 5 in., 12/3. .. 6 in., 14/9.

| | Per ton in London. £ s. d. | | £ s. d. |
|---|---|---|---|
| IRON— | | | |
| Common Bars ..... | 19 0 0 | to | 20 0 0 |
| Staffordshire Crown Bars good merchant quality | 20 0 0 | .. | 21 0 0 |
| Staffordshire "Marked Bars" ..... | 26 0 0 | .. | 27 0 0 |
| Mild Steel Bars ..... | 17 10 0 | .. | 18 10 0 |
| Steel Bars. Ferro-Concrete quality, basis price .. | 17 10 0 | .. | 18 10 0 |
| Hoop Iron, basis price .. | 29 0 0 | .. | 30 0 0 |
| " Galvanised .. | 43 0 0 | .. | 45 0 0 |
| Soft Steel Sheets, Black— | | | |
| Ordinary sizes to 20 g. | 25 0 0 | .. | 27 0 0 |
| " " " 24 g. | 26 0 0 | .. | 28 0 0 |
| " " " 26 g. | 28 0 0 | .. | 29 0 0 |
| Sheets Flat Best Soft Steel, C.R. & C.A. quality— | | | |
| Ordinary sizes, 6ft. by 2ft. to 3ft. to 20 g. | 33 0 0 | .. | 34 0 0 |
| Ordinary sizes, 6ft. by 2ft. to 3ft. to 22 g. and 24 g..... | 34 0 0 | .. | 36 0 0 |
| Ordinary sizes, 6ft. by 2ft. to 3ft. to 26 g... | 36 0 0 | .. | 38 0 0 |
| Flat and Galvanised Corrugated Sheets— | | | |
| Ordinary sizes, 6 ft. to 9ft. 20 g. ..... | 27 0 0 | .. | 28 0 0 |
| Ordinary sizes, 6ft. to 9ft. 22 g. and 24 g. | 28 0 0 | .. | 29 0 0 |
| Ordinary sizes 6ft. to 9ft. 26 g. ..... | 30 0 0 | .. | 32 0 0 |

## METALS (*Continued*).

| | Per ton in London. £ s. d. | | £ s. d. |
|---|---|---|---|
| Sheets Galvanised Flat, Best quality— | | | |
| Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker .. | 33 0 0 | .. | 34 0 0 |
| Best Soft Steel Sheets, 22 g. and 24 g. ..... | 34 0 0 | .. | 35 0 0 |
| Best Soft Steel Sheets, 26 g. ..... | 36 0 0 | .. | 37 0 0 |
| Cut Nails, 3in. to 6in. .. (under 3in. usual trade extras.) | 32 0 0 | .. | 33 0 0 |

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 3s. per foot super.

## LEAD, &c.

| | Delivered in London. £ s. d. | | |
|---|---|---|---|
| LEAD—Sheet, English, 4 lb. and up ..... | 36 10 0 | .. | — |
| Pipe in coils ..... | 37 0 0 | .. | — |
| Soil Pipe ..... | 39 10 0 | .. | — |
| Compo pipe ..... | 40 10 0 | .. | — |

NOTE—Country delivery, 30s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

| | | | |
|---|---|---|---|
| Old lead, ex London area, at Mills ..... per ton | 20 0 0 | .. | — |
| Do., ex country, carriage forward..... per ton | 21 0 0 | .. | — |

| | | | |
|---|---|---|---|
| COPPER— | | | |
| Strong Sheet ....per lb. | 0 2 3 | .. | — |
| Thin " .... " | 0 2 4 | .. | — |
| Copper nails .... " | 0 2 3 | .. | — |
| Copper wire .... " | 0 2 4 | .. | — |
| TIN—English Ingots " | 0 1 10 | .. | — |
| SOLDER—Plumbers' " | 0 0 11 | .. | — |
| Tinmen's..... " | 0 1 2 | .. | — |
| Blowpipe ..... " | 0 1 4 | .. | — |

## GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

| | Per Ft. | | Per Ft. |
|---|---|---|---|
| 15 oz. fourths .... | 4½d. | 32 oz. fourths .... | 10½d. |
| " thirds ..... | 5½d. | " thirds ..... | 1/- |
| 21 " fourths .... | 6½d. | Fluted, Obscured and Enamelled Sheet, | |
| " thirds ..... | 7½d. | 15 oz. | 7d. |
| 26 " fourths .... | 8d. | 21 " | 9d. |
| " thirds ..... | 9½d. | | |

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

| | Per Ft. |
|---|---|
| ¼ Rolled plate ..... | 5½d. |
| ⅜ Rough rolled ..... | 6½d. |
| ½ Rough rolled ..... | 7½d |
| Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white ..... | 7½d. |
| Ditto, tinted ..... | 9½d. |
| Rolled Sheet ..... | 6½d. |
| White Rolled Cathedral..... | 6½d. |
| Tinted do. ..... | 7½d. |

Cast Plate is ½d. extra on the price of rough rolled.

## PAINTS, &c.

| | | £ s. d. |
|---|---|---|
| Raw Linseed Oil in pipes..... | per gallon | 0 3 10 |
| " " " in barrels .... | " | 0 3 11 |
| " " " in drums .... | " | 0 4 0 |
| Boiled " " in barrels .... | " | 0 4 3 |
| " " " in drums .... | " | 0 4 4 |
| Turpentine in barrels ..... | " | 0 6 1 |
| " in drums (10 gall.) ... | " | 0 6 4 |
| Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.) | | 59 15 0 |

GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots .....per ton delivered 82 15 0

| | | |
|---|---|---|
| Red Lead, Dry (packages extra) .. | per ton | 41 0 0 |
| Best Linseed Oil Putty ..... | per cwt. | 0 17 6 |
| Filocol..... | per cwt. | 0 15 6 |
| Size. X D Quality..... | fkn. | 0 5 9 |

## VARNISHES, &c.

| | | Per gallon. £ s. d. |
|---|---|---|
| Oak Varnish.....Outside | | 0 15 0 |
| Fine ditto ..... | ditto | 0 17 2 |
| Fine Copal ..... | ditto | 1 1 6 |
| Pale Copal ..... | ditto | 1 2 6 |
| Pale Copal Carriage ..... | ditto | 1 4 6 |
| Best ditto ..... | ditto | 1 14 6 |
| Floor Varnish..... | Inside | 0 19 0 |
| Fine Pale Paper ..... | ditto | 0 18 0 |
| Fine Copal Cabinet ..... | ditto | 1 2 6 |
| Fine Copal flatting ..... | ditto | 1 0 6 |
| Hard drying Oak ..... | ditto | 0 18 0 |
| Fine Hard drying Oak ..... | ditto | 0 19 0 |
| Fine Copal Varnish ..... | ditto | 1 0 6 |
| Pale ditto ..... | ditto | 1 2 6 |
| Best ditto ..... | ditto | 1 14 6 |
| Best Japan Gold Size..... | | 0 12 6 |
| Best Black Japan ..... | | 0 18 0 |
| Oak and Mahogany Stain (water) .... .. | | 0 17 6 |
| Brunswick Black ..... | | 0 11 9 |
| Berlin Black..... | | 0 16 6 |
| Knotting (patent) ..... | | 1 16 0 |
| French and Brush Polish ..... | | 1 8 0 |
| Liquid Dryers in Terebine ..... | | 0 13 6 |
| Cuirass Black Enamel ..... | | 0 7 0 |

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

# CURRENT PRICES FOR BUILDING WORK IN LONDON.*

## EXCAVATOR.

| | | s. | d. |
|---|---|---|---|
| Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep | per yard cube | 18 | 0 |
| Add if in clay | „ „ | 1 | 10 |
| Add for every additional depth of 6 ft. | „ „ | 1 | 4 |
| Planking and strutting to trenches | per foot super | 0 | 7 |
| Do. to sides of excavation, including shoring | „ „ | 1 | 4 |

## CONCRETOR.

| | | s. | d. |
|---|---|---|---|
| Portland cement concrete in foundation 1 to 6 | per yard cube | 50 | 0 |
| Add if in underpinning in short lengths | „ „ | 9 | 6 |
| Add if in floors 6 in. thick | „ „ | 3 | 10 |
| Add if in beams | „ „ | 4 | 9 |
| Add if aggregate 1 : 2: 4 | „ „ | 14 | 3 |
| Add for hoisting not exceeding 10 ft. beyond the first 10 ft. | „ „ | 4 | 3 |

## BRICKLAYER.

| | | £ | s. | d. |
|---|---|---|---|---|
| Reduced brickwork in lime mortar and Fletton bricks | per rod | 47 | 10 | 0 |
| Add if in stocks | „ | 11 | 17 | 6 |
| Add if in Staffordshire blues | „ | 32 | 15 | 6 |
| Add if in Portland cement and sand | „ | 4 | 10 | 0 |

### FACINGS.

| | | s. | d. |
|---|---|---|---|
| Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks | per ft. super | 0 | 0 | 1¼ |

### POINTING.

| | | s. | d. |
|---|---|---|---|
| Neat flat strucks or weathered joint | „ „ | 0 | 0 | 3 |

### ARCHES.

| | | s. | d. |
|---|---|---|---|
| Extra only to the price of ordinary brickwork :— | | | |
| Fair external in half brick rings | „ „ | 0 | 0 | 11½ |
| Axed in stocks | „ „ | 0 | 1 | 11 |
| Rubbed and gauged jointed in putty camber or segmental | „ „ | 0 | 6 | 8 |

### SUNDRIES.

| | | s. | d. |
|---|---|---|---|
| Damp course in double course of slates breaking joint and bedded in Portland cement | „ „ | 0 | 1 | 6 |
| Setting ordinary register grates and stoves | each | 1 | 2 | 6 |
| Setting kitchener, including forming flues, &c., with all necessary fire bricks | „ | 6 | 5 | 0 |

## ASPHALTER.

| | | s. | d. |
|---|---|---|---|
| Half-inch horizontal damp course | per yard sup. | 8 | 0 |
| Three-quarter-inch vertical damp course | „ „ | 14 | 3 |
| One inch on flats in two thicknesses | „ „ | 12 | 0 |
| Angle fillet | per foot run | 0 | 3 |
| Skirting and fillet 6 in. high | „ „ | 1 | 6 |

## MASON.

| | | s. | d. |
|---|---|---|---|
| York stone templates fixed | per foot cube | 19 | 9 |
| York stone sills fixed | „ „ | 31 | 6 |
| Bath stone and all labour fixed | „ „ | 15 | 0 |
| Portland stone fixed | „ „ | 23 | 0 |

## SLATER.

| | | s. | d. |
|---|---|---|---|
| Welsh 16 in. × 8 in. 3 in. lap, including nails | per square | 98 | 0 |
| Do. 20 in. × 10 in. Do. Do. | „ | 115 | 0 |
| Do. 24 in. × 12 in. Do. Do. | „ | 117 | 6 |

## CARPENTER AND JOINER.

| | | s. | d. |
|---|---|---|---|
| Fir framed in plates | per foot cube | 7 | 0 |
| Do. joists | „ „ | 8 | 0 |
| Do. roofs, floors and partitions | „ „ | 9 | 3 |
| Do. trusses | „ „ | 11 | 9 |

| | | ¾″ | 1″ | 1¼″ | 2″ |
|---|---|---|---|---|---|
| Deal rough close boarding | per sq. | 42/– | 48/– | 56/– | 85/– |

| | | s. | d. |
|---|---|---|---|
| Flat centering for concrete floor, including struts or hangers | „ | 63 | 0 |
| Do. to beams | per ft. sup. | 1 | 6 |
| Centres for arches | „ | 2 | 0 |
| Gutter boards and beams | „ | 1 | 8 |

### FLOORING.

| | | ¾″ | 1″ | 1¼″ | 1½″ |
|---|---|---|---|---|---|
| Deal-edges shot | per sq. | | 54/– | 64/– | 74/– |
| Do. tongued and grooved | „ | | 60/– | 72/– | 80/– |
| Do. matchings | „ | 45/– | 55/– | | |
| Moulded skirting, including backings and grounds | per ft. sup. | 2/– | 2/3 | 2/9 | 3/3 |

### SASHES AND FRAMES.

| | | s. | d. |
|---|---|---|---|
| One-and-a-half moulded sashes or casements | per foot super | 1 | 11 |
| Two Do. Do. Do. | „ „ | 2 | 4½ |
| Add for fitting and fixing | „ „ | 0 | 6 |
| Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights ; average size | „ „ | 4 | 11 |

### DOORS.

| | | 1½″ | 1¾″ | 2″ |
|---|---|---|---|---|
| Two-panel square framed | per ft. sup. | 2/6 | 2/9 | 2/11 |
| Four-panel Do. | „ | 2/10 | 3/2 | 3/5 |
| Two-panel moulded both sides | „ | 3/2 | 3/5 | 3/8 |
| Four-panel Do. Do. | „ | 3/6 | 3/9 | 4/– |

## CARPENTER AND JOINER—continued.

### FRAMES.

| | | s. | d. |
|---|---|---|---|
| Deal wrot moulded and rebated | per foot cube | 19 | 0 |

| | | 1″ | 1¼″ | 1½″ |
|---|---|---|---|---|
| Plain deal jamb linings framed | per ft. sup. | 2/1 | 2/3 | 2/6 |
| Deal shelves and bearers | „ | 1/10 | 2/– | 2/1 |
| Add if cross tongued | „ | 2d. | 2d | 2d. |

### STAIRCASES.

| | 1″ | 1¼″ | 1½″ | 2″ | 2½″ |
|---|---|---|---|---|---|
| Deal treads and risers in and including rough brackets | 3/2 | 3/10 | 4/5 | — | — |
| Deal strings wrot in both sides and framed | 4/3 | 4/6 | — | — | — |

| | | s. | d. |
|---|---|---|---|
| Housings for steps and risers | each | 0 | 11½ |
| Deal balusters, 1 in. × 1¼ in. | per ft. run. | 0 | 9 |
| Mahogany handrail ; average 3 in. × 3 in. | „ „ | 6 | 0 |
| Add if ramped | „ „ | 11 | 10 |
| Add if wreathed | „ „ | 23 | 9 |

### FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

| | | | |
|---|---|---|---|
| 6 in. barrel bolts | 8½d. | Rim locks | 2/4½ |
| Sash fasteners | 11½d. | Mortice locks | 5/3 |
| Casement fasteners | 1/5 | Patent spring hinges and letting in to floor and making good | 19/– |
| Casement stays | 1/2 | | |
| Cupboard locks | 1/5 | | |

## FOUNDER AND SMITH.

| | | s. | d. |
|---|---|---|---|
| Rolled steel joists | per cwt. | 25 | 0 |
| Plain compound girders | „ | 28 | 0 |
| Do. stanchions | „ | 31 | 0 |
| In roof work | „ | 36 | 0 |

## RAIN-WATER GOODS.

| | | 3″ | 4″ | 5″ | 6″ |
|---|---|---|---|---|---|
| Half-round plain rebated joints | ft. run | 1/11 | 2/4½ | 3/7 | 4/– |
| Ogee Do. Do. | „ | 2/4½ | 3/1 | 3/10 | 4/9 |
| Rain-water pipes with ears | „ | 2/9 | 3/7 | | |
| Extra for shoes and bends | each | 4/4 | 5/11 | | |
| Do. stopped ends | „ | 1/11 | 2/4½ | 3/7 | 4/– |
| Do. nozzles for inlets | „ | 2/2 | 2/7 | 3/10 | 4/3 |

## PLUMBER.

| | | s. | d. |
|---|---|---|---|
| Milled lead and laying in flashings and gutters | per cwt. | 58 | 0 |
| Do. Do. in flats | „ | 54 | 0 |
| Extra labour and solder in coated cesspools | each | 7 | 4 |
| Welt joint | per ft. run. | 0 | 6 |
| Soldered seam | „ „ | 1 | 10½ |
| Copper nailing | „ „ | 0 | 7 |

| | | ¼″ | ½″ | ¾″ | 1″ | 1½″ | 2″ | 4″ |
|---|---|---|---|---|---|---|---|---|
| Drawn lead waste | per ft. run | 11d. | 1/7 | 1/10 | 3/3 | 4/– | | |
| Do. service | „ | 1/6 | 2/– | 2/4 | 3/8 | | | |
| Do. soil | „ | | | | | | | 6/6 |
| Bends in lead pipe | each | | | | | 3/5 | | 8/7 |
| Soldered stop ends | „ | 1/3 | 1/9 | 2/2 | 3/– | 3/8 | | |
| Red lead joints | „ | 11d. | 1/– | 1/4 | 2/– | 2/6 | 5/1 | |
| Wiped soldered joints | „ | 3/– | 3/8 | 4/3 | 5/2 | 6/10 | 10/3 | |
| Lead traps and cleaning screws | „ | | | | 15/4 | 20/6 | | |
| Bib cocks and joints | „ | 7/1 | 10/8 | 17/1 | 45/6 | | | |
| Stop cocks and joints | „ | 17/1 | 19/– | 28/6 | 71/3 | | | |

## PLASTERER.

| | | s. | d. |
|---|---|---|---|
| Render, float and set in lime and hair | per yard sup. | 3 | 2 |
| Do. Do. Sirapite | „ „ | 3 | 7 |
| Do. Do. Keen's | „ „ | 4 | 9 |
| Add sawn lathing | „ „ | 1 | 11 |
| Add metal lathing | „ „ | 3 | 4 |
| Portland cement screed | „ „ | 2 | 9 |
| Do. plain face | „ „ | 4 | 6 |
| Mouldings in plaster | per 1 girth | 0 | 3 |
| One-and-a-half granolithic pavings | per yard sup. | 6 | 7 |

## GLAZIER.

| | | s. | d. |
|---|---|---|---|
| 21 oz. sheet plain | per foot sup. | 1 | 4 |
| 26 oz. Do. | „ „ | 1 | 7 |
| Obscured sheet | „ „ | 1 | 9 |
| ¼ in. rolled plate | „ „ | 1 | 0 |
| ¼ in. rough rolled or cast plate | „ „ | 1 | 1 |
| ¼ in. wired cast plate | „ „ | 1 | 7 |

## PAINTER.

| | | s. | d. |
|---|---|---|---|
| Preparing and distempering, 2 coats | per yard sup. | 1 | 5 |
| Knotting and priming | „ „ | | 11 |
| Plain painting 1 coat | „ „ | 1 | 5 |
| Do. 2 coats | „ „ | 2 | 3 |
| Do. 3 coats | „ „ | 3 | 0 |
| Do. 4 coats | „ „ | 3 | 10 |
| Graining | „ „ | 2 | 10 |
| Varnishing twice | „ „ | 2 | 4 |
| Sizing | „ „ | 0 | 4 |
| Flatting | „ „ | 0 | 9 |
| Enamel | „ „ | 1 | 11 |
| Wax polishing | per foot sup. | 0 | 10½ |
| French polishing | „ | 1 | 8 |
| Preparing for and hanging paper | per piece | 2/– to 5/– | |

* These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 11 should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

## PATENTS.

APPLICATIONS PUBLISHED.*

164,511.—M. M. H. J. Chotani: Method of and means for preventing cracking or splitting in timber.

164,518.—M. S. Moore and B. L. Jenkins: Building-block moulding machines.

140,402.—Ball Engine Co.: Excavating machines.

164,522.—C. G. Muench: Pulp board suitable for lathing, plaster, stucco, and like material, and process of making the same.

164,542.—A. Skipsey: Manufacture of through pattern tiles and floor covering.

164,632.—Leeds Fireclay Co., Ltd., and S. P. Alcock: Hinges.

164,666.—C. F. Curtis: Cementitious compositions suitable for flooring, paving, and so forth.

165,120.—W. Bagguley and R. Hickton: Manufacture of bricks or blocks.

165,134.—S. Ewart: Baths.

165,139.—N. N. Ladefoged: Fastenings or locks for doors.

165,246.—L. W. Goold (Brunswick Balke Callender Co.): Closet-seat hinges.

165,266.—K. Albertz: Building bricks or blocks and structures erected therewith.

165,276.—T. P. Eustege: Holders or stays for doors and windows.

165,300.—J. T. Godfrey and F. C. Haynes: Roofing tiles, rain channels, and cover boxes.

147,497.—M. Reiche: Windows.

164,792.—A. J. Bohringer, W. Digby and W. G. Ramsey: Manufacture of concrete blocks or bricks.

164,825.—R. J. Williams: Bridges.

164,836.—C. H. Ivinson and G. S. Roberts: Anti-corrosive paint or composition.

164,857.—F. W. Brampton: Flooring and like tiles.

164,947.—Bell Bros., Ltd., and M. R. Kirby: Concrete buildings.

147,696.—E. Lange: Method of sinking pipes into the ground for the construction of piles or pillars.

165,008.—A. C. Holzapfel: Floor coverings.

165,466.—W. W. Clarke: In situ method of manufacturing dwelling-houses and like structures built mainly of concrete or similar material, and apparatus employed therein.

165,480.—J. C. Roberts: Packing cases, boxes and drums.

139,766.—Etablissements Rouchaud & Lamassiaude Soc. Anon: Brick presses.

141,679.—W. Schmidding: Lock.

165,533.—P. A. Smith and J. M. Rutter: Ranges or stoves.

155,216.—W. Schmidding: Lock.

165,559.—J. Thewlis: Machines for making concrete blocks.

165,624.—J. F. Ritchie and W. C. Henman: Collapsible combination furniture.

165,636.—S. A. E. Larsen: Tubular locks.

165,643.—L. Chaway: Latch or bolt fastening for doors.

165,673.—W. Jones: Brick kilns.

165,685.—J. G. Thomas: Door locks.

165,817.—E. Orval: Systems of combined heating and ventilation for dwelling-houses.

165,845.—W. E. Evans (J. H. Williams): Road-contouring apparatus.

165,882.—Elliot & Sons (Reading), Ltd., and C. A. Elliot: Revolving doors.

165,884.—W. Marriott: Reinforced-concrete posts and poles.

165,887.—J. Johnston: Methods of applying concrete to the construction of houses and other buildings.

165,911.—P. B. Jagger: Moulding concrete and other articles.

165,918.—Chimney Construction and Boiler Setting Co., Ltd., and E. Weir: Factory and like chimneys.

165,962.—Concrete Dwellings, Ltd., and H. Edon-Brown: Moulds for casting hollow concrete and like structures such as walls.

165,972.—P. S. King: Concrete building-blocks.

150,988.—Ambursen Engineering Co.: Mold panel for constructing floors, walls, ceilings, and other structures.

142,121.—P. L. M. Caron: Manufacture of concrete or ferro-concrete pipes.

166,002.—J. B. Harvey: Concrete mixers.

166,012.—Bell Bros., Ltd., and M. R. Kirby: Concrete buildings.

157,431.—R. Hoffer and S. Renyi: Construction of walls for buildings.

166,087.—R. Pattinson: Concrete construction.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

## TRADE NEWS.

Mr. A. L. Tester, A.M.I.M.E., who joined the firm of Messrs. William & Williams, Ltd. (engineers and metal casement manufacturers), of Chester, towards the end of last year, has been appointed sales manager to Mr. B. A. Williams, Managing Director. Mr. Tester will control the sales organisation from the Sardinia House office in Kingsway, W.C. 2.

The Road Section of the Reinforced Concrete Materials Department of Messrs. Brown & Tawse, Ltd. (3, London Wall Buildings, E.C. 2), has been re-opened and will be carried on under the charge of Mr. G. H. Hoile, as before. Mr. Thomas L. Farrar (3, London Wall Buildings) is sole selling agent for South-Eastern England.

Mr. P. C. Maidment, of 164, Sloane-street, S.W., has entered into partnership with Mr. H. S. Wilkinson, and new premises have been acquired and the business of builders, decorators and electricians is now being carried on at 13, Beauchamp-place, S.W. 3, under the title of Maidment & Wilkinson. (Telephone, Kensington 2020.)

### Tenders for Stoneware Pipes for the Argentine Republic.

A cable has been received from the Commercial Secretary to His Majesty's Legation at Buenos Aires (Mr. H. O. Chalkley) stating that the Board of Sanitary Works of the Argentine Republic is advertising for tenders for the supply of 206,840 straight stoneware pipes of which 138,000 are 152 millimetres and 44,000 of 102 millimetres. In addition to these pipes certain quantities of junction bends are also required. It is understood that the tenders received will be opened on September 5 that they must be presented through a local agent and that the submission of tenders is limited to manufacturers on the "approved" list. In accordance with the usual regulations governing tenders invited by this Board it is understood that they will require to be on stamped paper and accompanied by certificate of a deposit in the Bank of the Nation for 3 per cent. of the amount of the tender and that quotations will be required to be on deck of carrying vessel alongside Buenos Aires. A copy of the specification relating to stoneware pipes required by this Board was forwarded to the Department of Overseas Trade (35, Old Queen street, S.W. 1) in connection with a similar inquiry received in 1920, and this specification is available for inspection.

### Roumanian Timber Industry.

We note from the *Report on Economic Conditions in Roumania*, April, 1921, by Mr. Alexander Adams, Commercial Secretary, H.M. Legation, Bucharest (London: H.M. Stationery Office, price 2s. 9d. net.) that the timber industry in that country has been working very much under capacity during the year 1920, but notwithstanding this fact it would appear that there are fairly large stocks of sawn whitewood on the mills in Transylvania and the Bucovina. This timber finds its markets principally in the Levant, Italy and Spain, and would seem to offer a prospect for British importers. There are certain advantages in dimensions which Roumanian shipments have over those coming from Scandinavia, although it must be borne in mind that the majority of Roumanian timbermen are not accustomed to sawing for the English market.

## TENDERS.

**Communications for insertion under this heading should be addressed to "The Editor," and must reach him *not later than Tuesday evening.***

***Denotes *accepted*. †Denotes *provisionally accepted*. ‡Denotes *recommended for acceptance*. §Denotes *accepted subject to modifications*.**

ALFRETON.—Erection of 54 houses, for the U.D.C.:—

| | |
|---|---|
| *Evans | £37,800 |

BARNSLEY.—For the erection of 90 houses on the Huddersfield-road site, for the T.C.:—

| | |
|---|---|
| William Malthouse, Sheffield | £59,755 |

CHEPSTOW (MON.).—For internal decorations, &c., to the "George" Hotel, for Messrs. Lloyd & Yorath, Ltd.:—

| | |
|---|---|
| *Dawkins, Harris & Weaver, Ltd., Chepstow | £230 |

CHIRK.—For sewerage scheme, for the R.D.C. Messrs. Berrington, Son & Watney, architects and surveyors, Wolverhampton:—

| | |
|---|---|
| *Hussey & Egan, Birmingham | £8,782 0 2 |
| S. F. Hopley, Newport, Mon. | 8,989 0 0 |
| The Unit Construction Co., Ltd., Birmingham | 9,200 0 0 |
| M. A. Boswell, Wolverhampton | 9,462 17 4 |
| Geo. Greasley, Leicester | 9,575 0 0 |
| Andrew Blair, Lyell & Co., Birmingham | 9,630 0 0 |
| A. H. Price & Co., Nottingham | 9,779 19 0 |
| Martin & Element, Smethwick | 9,892 0 0 |
| Herbert E. Holloway, Wolverhampton | 10,007 19 3 |
| H. C. Pullar, Manchester | 10,089 14 8 |
| Arthur Holloway, Wolverhampton | 10,161 1 1 |
| John Taylor & Sons, Stoke-on-Trent | 10,170 15 4 |
| J. T. Jones, Cefn Ruabon | 10,175 0 0 |
| E. E. Jeavons & Co., Dudley Port | 11,047 5 0 |
| Abraham Graham & Sons, Huddersfield | 11,418 3 2 |
| Wm. Moss & Sons, Loughborough | 12,120 0 0 |
| J. C. Vaughan, Oswestry | 12,008 0 0 |

DURHAM.—Supply of steam rollers, to the C.C.:—

*Edison Steam Rolling Co... For rollers at £750 each, with vans at £95 each, and water-carts at £43 each.

DURHAM COUNTY COUNCIL.—The Works Committee have accepted the following tenders:—

*Sir W. Arrol & Co., Gateshead—Pitch pine baulks at 2s. 6d. per cub. ft.

*Tarslag, Ltd., Stockton—Supplying and laying tar macadam on new Tees-road, at 6s. 3d. per sq. yard.

*Gowland & Co., Westgate—Supply of 2 in. hand-broken limestone on road side, Eastgate-road, at 10s. 6d. per cub. yard.

*Stockton Stone & Concrete Co., Norton—10 in. by 8 in. concrete kerb delivered Pelaw, 8s. 6½d. per lin. yard.

*Sharpe, Jones & Co., Parkstone, Dorset—36 in., 42 in., and 48 in. rock concrete tubes, at 35s., 49s., and 66s. per ft.

*Taroads Syndicate, Ltd., Westminster—For tar-spraying (as required), at 2¼d. per super. yard.

EAST COWES.—For alterations and repairs to East Cowes Barracks, for the Isle of Wight Territorial Force Association. Messrs. Bevis & Son, architects, Elm-grove Chambers, Southsea:—

| | |
|---|---|
| *J. Ball & Son, Cowes | £1,240 0 0 |
| Bromley & Webb, Southampton | 1,570 0 0 |
| A. P. Williams, Newport | 1,606 14 3 |
| Brading & Son, East Cowes | 1,450 0 0 |
| William White, Freshwater | 1,410 0 0 |
| Tanner Bros., Southsea | 1,600 0 0 |
| Purnell & Clifford, Reading | 1,400 0 10 |

ELLAND.—For painting and renovating Council Schools, for the West Riding Education Committee, Mr. H. Wormald, Education Architect, Wakefield:—

| | |
|---|---|
| *Greetland West Vale Council School:* | |
| *Frank Crossley, Greetland | £170 0 |
| W. L. Moores, Barkisland | 175 0 |
| Frank Sykes, Halifax | 206 3 |
| T. H. Holdsworth, Halifax | 216 0 |
| W. Whiteley, Elland | 220 0 |
| Jas. Barber, Halifax | 231 10 |
| Seth Collins & Sons, Stainland | 245 0 |
| R. Collins & Sons, Stainland | 275 0 |
| H. B. Pearson Huddersfield | 250 0 |
| M. Colgan, Halifax | 255 0 |
| J. F. Atkinson, Elland | 310 0 |
| W. Swallow, Halifax | 470 0 |
| *Mirfield Hopton Council School:* | |
| *T. H. Holdsworth, Halifax | £142 0 0 |
| G. H. Turner, Dewsbury | 198 0 0 |
| J. Shepley, Dewsbury | 230 0 0 |
| J. F. Atkinson, Elland | 240 0 0 |
| M. Colgan, Halifax | 248 0 0 |
| Bickers, Ltd., Dewsbury | 309 12 0 |
| Jas. A. Schorah, Dewsbury | 320 0 0 |
| Parker Bros., Halifax | 346 11 6 |
| *Heckmondwike Battye-street Council School:* | |
| G. H. Turner, Dewsbury | £115 0 |
| *H. Taylor, Heckmondwike | 190 0 |
| J. W. Bennett, Heckmondwike | 222 0 |
| Bickers, Ltd., Dewsbury | 229 9 |
| H. Exley, Heckmondwike | 230 0 |
| M. Colgan, Halifax | 270 0 |

FOLKESTONE.—For certain works to be carried out in adapting "Praetoria House," for use as a County School for Girls, for the Kent Education Committee. Mr. W. H. Robinson, County Education Architect, Maidstone :—

| | |
|---|---|
| ‡O. Marx, Folkestone | £2,235 0 |
| S. Binfield, Folkestone | 2,240 0 |
| Stagg Bros., Margate | 2,339 0 |
| D. Godden & Son, Ashford | 2,380 0 |
| James Bodle, Ltd., Eastbourne | 2,449 0 |
| Hayward & Paramor, Folkestone | 2,536 10 |
| J. T. May, Broadstairs | 2,543 0 |
| R. Webster, Folkestone | 2,549 0 |
| H. Knock, Ashford | 2,555 0 |
| Jenner & Son, Folkestone | 2,564 0 |
| G. Browning, Canterbury | 2,570 0 |
| Oliver Kennard, London | 2,585 0 |
| Norman Smith & Son, Maidstone | 2,598 0 |
| Cook & Parker, Folkestone | 2,605 0 |
| J. S. Clark, Sandgate | 2,607 0 |
| G. H. Denne & Son, Deal | 2,629 0 |
| T. T. Denne, Kent | 2,648 0 |
| J. G. Parsons & Son, Folkestone | 2,649 0 |
| Cox Bros., Maidstone | 2,650 0 |
| S. Vant, Folkestone | 2,799 0 |
| N. O. Baker, Sandgate | 3,120 0 |

GLASGOW.—Execution of reinforced concrete work for water tanks, &c., at new municipal buildings, for the T.C. :—

*Melville, Dundas & Whaitson.. £5,000 3 1

HOLLYWOOD HALL.—For repairs and improvements at Bael Hill farm house, for the Durham C.C. :—

*Hooper Bros., Wolsingham..... £402 15

HOLLYWOOD HALL.—(*a*) Water supply works, and (*b*) duplication of generating plant, at the Sanatorium, for the Durham C.C. :—

*(*a*) Hooper Bros..... £1,020 18 6
*(*b*) T. G. Usher & Co..... 1,857 15 0

LINTHWAITE.—For the erection of 40 houses at the Storth Estate, Milnsbridge, for the U.D.C. Mr. J. Ainley, architect, Huddersfield :—

*Bailey & Stott, Golcar (*Mason*).... £11,000
*Wrigley & Beaumont, Linthwaite (*Joiner*)..... 5,540
*Albert Ainley, Slaithwaite (*Plumber*) 2,230
*Samuel Holdsworth, Brierley Wood (*Painter*)..... 513
*Geo. Hy. Day & Sons, Milnsbridge (*Slater*)..... †751
*Tom Robinson & Son, Marsh (*Slater*) †1,020
John Cooke, Huddersfield (*Concreter*) 850
*Geo. Hy. Day & Sons, Milnsbridge (*Plasterer*)..... †1,027
*Tom Robinson & Son, Marsh (*Plasterer*)..... †1,350
*Edward Rayner, Milnsbridge (*Electrician*)..... 279

* Subject to the Housing Commissioner's approval.
† Jointly 16 houses and 24 houses.

READING.—Painting work at schools, for the T.C. :—

*F. T. Robinson—Swansea-road School (Section 1)..... £279 0 0
*Wheeler Bros.—Swansea-road School (Sections 2 and 3).. 254 17 6
*Wheeler Bros.—St. Mary School 207 11 6

READING.—Repairs to playgrounds at schools, for the T.C. :—

*J. Wainwright & Co., Shepton Mallet..... £339 17 4

SALFORD.—For certain works of structural alteration at Eccles New-road Institution, for the Guardians. Mr. J. W. Beatty, engineer :—

Fearnley & Sons, Salford..... £497 10

SHEFFIELD.—Erection of footbridge over railway at Neepsend, for the T.C. :—

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